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ABSTRACT

The economics of food stamps - the America's major food assistance program is investigated in order to answer the following questions: (1) whether malnutrition be solved by food supplements or cash allowances; (2) what the benefits to recipients are; (3) whether eligibility requirements permit participation by the needy and exclude higher income households; (4) why the participation in food assistance programs is as low as it is; and, (5) whether better nutrition programs are available. Chapter 1 examines the development of the existing food stamp policy under the Food Stamp Act of 1964 and subsequent amendments. Chapter 2 analyzes the economic costs of the food stamp program, taking into account the direct and indirect costs of both federal and non-federal food stamp organizations. Chapter 3 looks at the total benefits from the program, focusing particularly on the estimated relative gains to eligible recipients and the difficulty of determining program benefits. Chapter 4 discusses alternative solutions to the problem of malnutrition and suggests possible remedies. The final chapter gives the major conclusions and recommendations of the study. Twelve tables and figures are included. (Author/AM)

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FOOD STAMPS AND NUTRITION

Kenneth W. Clarkson

With a foreword by Yale Brozen

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American Enterprise Institute for Public Policy Research
Washington, D. C.

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CONTENTS

FOREWORD, *Yale Brozen* 1

INTRODUCTION 5

I **DEVELOPMENT OF FOOD STAMP POLICY** 9
Early Food Stamp Programs 10
The 1964 Food Stamp Act and Amendments 11
Growth of the Food Stamp Program 19
Current Food Stamp Policy 21

II **FOOD STAMP PROGRAM COSTS** 27

III **FOOD STAMP PROGRAM BENEFITS** 35
Recipient Benefits 35
Indirect Benefits 48

IV **ALTERNATIVES FOR IMPROVING NUTRITION** 55
Methods for Improving Diets 56
Local Nutrition Incentives Program 60

CONCLUSIONS 61

APPENDIX A: Economics of Food Stamp Benefits and Participation 65

APPENDIX B: Estimating Participant Benefits 71

APPENDIX C: Public Programs and Governmental Financing 73

APPENDIX D: Studies of Food Nutrition 75

NOTES 79

TABLES

1. Food Stamp Program: Eligibility Standards for Nonassistance Households, 1966 13
2. Comparison of Major Provisions of Public Law 91-671 and Public Law 88-525 17
3. Food Stamp Program: Maximum Monthly Income and Resource Eligibility Levels, January 1975 22
4. Food Stamp Program: Monthly Coupon Allotments and Purchase Requirements for the Forty-Eight Contiguous States and Washington, D. C., January 1975 23
5. Food Stamp Program: Total Allotments, Purchases, Costs and Participation, Fiscal Years 1961–1976 ... 28
6. U.S. Per Capita Disposable Personal Income, Farm and Nonfarm Population, 1962–1973 36
7. Analysis of Food Stamp Benefits, by Income Class and Household Size, June 1972 38
8. Distribution of Benefits among Food Stamp Recipients, by Income Class, June 1972 41
9. Variations in Public Assistance and Food Stamp Benefits, July 1970 44
10. Distribution of Eligible Households and Households Participating in the Food Stamp Program, by Income Class, 1972 46
11. Hunger and Failure-to-Feed Counties in the United States, 1968 and 1973 51
12. Minimum-Cost Palatable Diet for a Family of Three for Four Weeks, May 1955 and July 1974 58

C-1 Benefits, Costs, and Net Benefits for Programs with the Public Good Characteristic 73

D-1. Recent Studies of Nutrition for Food Stamp Participants and Nonparticipants, 1972–1973 77

FIGURES

1. Food Program Funding, 1969–1975 20

A-1. Food Preferences and Program Participation 65

A-2. Distribution of Recipient Benefits 68

D-1. Income and Quality of Diets 76

FOREWORD

Food stamps were originally conceived in the 1930s as an adjunct of agricultural programs designed to raise the prices of farm commodities. In that endeavor, these activities may have been all too successful.

By now we have had more than a decade of experience with the new food stamp program that was instituted in the early 1960s. In this study, Professor Clarkson surveys that experience to see whether the program is serving well either of its two primary objectives—improvement of nutrition among the poor and supplementation of the income of poor farmers. He finds that it is not.

Perhaps we should not be surprised at these findings. As to the first of these objectives, there is nothing inherent in the food stamp program that requires, or even encourages, the purchase of nutritious foods. Since food stamps are nothing more than an income supplement, with the recipient required only to spend the supplement on food products, no improvement in nutrition necessarily results. Recipients may use the stamps to purchase expensive foods that are no more nutritious than the cheaper foods they would have bought with a lower food budget. Steak is no more nourishing than pot roast. Canned vegetables are no more nutritious than fresh. Prepared TV dinners or frozen, breaded, precooked chicken may be less healthful than a vegetable-chicken stew. And the substitution of soft drinks and snack foods for milk and vegetables, which common gossip insists is one use made of food stamps by some families (and which was found by studies of food stamp recipients to have occurred in some groups),[1] is a positive disservice to children.

The incidence of malnutrition in families well above the poverty line should have warned us that income supplementation in the form

of food stamps (or cash) would not automatically eliminate malnutrition among the poor. What is ironic is that the average expenditure for the purchase of food stamps is more than adequate to cover the cost of a balanced; although perhaps monotonous, diet. Only a minority of low-income families had poor diets before food stamps were provided.[2] It would seem, then, that except for the poorest of the poor little more could have been expected from the provision of food stamps than decreased monotony and increased convenience through the purchase of packaged "maid service."

Some studies have concluded that the food stamp program has improved the nutritional adequacy of diets. These studies point to the fact that families receiving food stamps have better diets than families in the same income categories who do not elect to go into the program. The self-selection factor that governs program participation suggests that this comparison does not substantiate the efficacy of the program. Those who choose not to participate are likely to be those who choose to spend less on food than the amounts that would have been required to purchase food stamps.[3] Apparently they find the sacrifice of other products not worth the additional expenditure on food stamps despite the bonuses offered in free food stamps. They have poor diets, then, because they prefer other items to the additional food the program would provide. Food stamps are more likely to be used by those who already have adequate diets and who join the program to obtain the subsidy. Their better diets are not the result of food stamps.

The occasional, heartbreaking (but never confirmed) news report of some aged person subsisting on dog food is hardly support for the scale and level at which the food stamp program now operates. It is not necessary to provide food stamps to families of four with *adjusted* incomes as high as $7,000 a year (in some cases over $10,000 a year before allowed deductions) in order to provide for such persons. And in the case of strikers, we are providing food stamps to people with annual incomes well in excess of $7,000—even in the year in which they receive food stamps. The average family receiving food stamps in 1973 consisted of 3.2 persons with an average income of $4,200—well above the poverty line (and it should be noted that the average-income measure does not include in-kind income such as subsidized housing, free school lunches, Medicaid and Medicare, day care, and so on).

Food stamps not only fail to eliminate malnutrition among the poor (in the absence of counseling on what constitutes a healthful diet and on the value of good nutrition), but they also fail to supplement income efficiently. Professor Clarkson finds that our

government spends in excess of $1.09 to provide $1.00 in bonus food stamps that have a value to their recipients of only 82 cents. In other words, the average recipient would trade his bonus food stamps worth $1.00 in food products for 83 cents in cash or other goods and think he was better off. Indeed, some recipients would think they were better off if they received 50 cents in cash instead of $1.00's worth of additional food, judging by the fact that they sell their bonus stamps, illegally, for less than 50 cents on the dollar.

According to a recent Department of Agriculture study, about 50 percent of the bonus stamps provided are not used to purchase additional or more nutritious food (or even packaged "maid service").[4] Rather than adding to the quality of the diet of stamp recipients, they simply replace cash expenditures formerly made for food. A portion of the bonus stamps is really a cash supplement smuggled into this program in the guise of providing a more adequate diet. Since a plethora of cash supplement programs already exists, there is no case for one more. If anything, there is a need to reduce the number.[5] This suggests the advisability of one immediate reform: to increase the cash price of any given quantity of food stamps in order to eliminate the "cash supplement" component.

If we wish to supplement income, cash grants would be less costly to taxpayers than food stamps and less wasteful of resources. Smaller amounts of cash would increase welfare more than the larger amounts spent on the food stamp program. To meet the needs of the poor, we should place our reliance upon existing income-supplement programs rather than resorting to an in-kind income supplement program that is inefficient and that compounds the disincentive effects of other programs.[6]

As to the second objective of the food stamp program, supplementation of the income of poor farmers, food stamps fail as miserably here as they do in eliminating malnutrition. The majority of the food dollar spent at retail (62 percent) goes to transportation, processing, and wholesale and retail handling. The majority of the dollar spent by the federal government to supplement the food budgets of the poor goes for administration and for the services of the food processing and transportation industries. Little of that dollar gets to farmers—and that which does benefits mainly those farmers who are already well off. As a device to benefit poor farmers, food stamp outlays must be one of the most notorious failures among all federal programs.

In his analysis of the food stamp program, Professor Clarkson does not examine the impact of the program on the amount of income that working recipients of food stamps choose to earn.

Other analysts have found that recipients of food stamps with some wage income choose to work fewer hours when food stamps are available. The decrease in income from work is "roughly equal to the subsidy so that the two cancel out and there is no net gain in income. This suggests that offering food stamps [to the working poor] results in no net gain, except in increased leisure, for the participants."[7]

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INTRODUCTION

In the early 1930s, a time when unemployment and poverty were spreading, the spectacle of little pigs being killed and crops being plowed under in the attempt to raise farm prices led to public outcry. A second approach, government purchase and accumulation of "surpluses," seemed no better, because the government-held stocks threatened to overwhelm available storage facilities and spoilage made the program an expensive method of destruction.

In an effort to make use of these government stocks without depressing prices, the distribution of surplus commodities through private and state welfare agencies was begun. In 1932 a congressional resolution transferred 40 million bushels of government wheat to the Red Cross for the use of the needy.[1] And from 1933 through 1935, the Federal Surplus Relief Corporation distributed commodities acquired under Section 12(b) of the 1933 Agricultural Adjustment Act (P.L. 73-10) to state welfare agencies.[2] Giveaway programs to foreign lands, later formalized under Public Law 480, followed.

In 1939, the first food stamp plan was instituted. This plan, which involved stamps valid only for the purchase of designated surplus commodities, became a casualty of the wartime food shortage in 1943. In 1961 a pilot food stamp program was undertaken in "distressed areas"—eight of them—where there was substantial unemployment, many families with low incomes, and high participation in the federally donated commodities program. This program, which permitted recipients to purchase all domestically produced

Special thanks are extended to Yale Brozen, Edgar K. Browning, Donald L. Martin, Michael P. Murray, and Edgar O. Olsen who provided various suggestions and comments on this study.

foods, was formalized and eligibility extended to all states in the Food Stamp Act of 1964.

In addition, the federal food assistance effort includes special programs designed to reach specific nutrition problems. The two main examples are the Child Nutrition Act of 1966 and the National School Lunch Act of 1970.

Although the earlier food assistance programs were instituted for the announced purpose of improving nutrition, their main impetus and support came from the agricultural sector. Writing in 1963, Don Paarlberg pointed out that food program legislation was generated in the agricultural committees of the Congress rather than in the committees concerned with health and welfare; it was the agricultural budget, he noted, that carried the cost of subsidized food consumption.[3] In food legislation and administrative actions since 1963, more attention has been given to the objectives of nutrition.[4] Part of the change in policy can probably be attributed to increased (relative) incomes in agriculture and in the food industry in recent years.[5]

Whether existing food assistance programs can eliminate malnutrition is a hard question to answer. While poverty, hunger, and malnutrition have decreased since the 1930s, the decrease has apparently come to a halt in the last five years despite a fourfold increase in federal food assistance programs in this period.[6] More importantly, these programs also fail to reach most of those entitled to federal food assistance. In over one-third of the nation's counties, less than 34 percent of those who are eligible participate in some federal food program.[7]

With the disappearance of "excessive" food production in the last three years, with the growing belief that food stocks would be inadequate to cope with crop failures in various parts of the world, and with the uncertainties about how to reduce malnutrition, it would seem that a major reason for the provision of income supplements in a form limiting them to the purchase of food may have disappeared. Some recognition of this surfaced in the Social Security Amendments of 1972. These amendments replaced the federal/state cash programs that, together with supplementary federal food stamps, had supported the elderly, the blind, and the disabled.[8] The new program for these groups, Supplemental Security Income, provided for larger cash payments partially financed by the federal government and eliminated food stamp supplements as of January 1974.

In the light of all this, it may be asked whether food assistance programs serve their objectives. Can malnutrition be solved by food supplements or cash allowances? What are the benefits to recipients?

Do eligibility requirements permit participation by the needy and exclude higher income households? Why is participation in food assistance programs as low as it is? Are better nutrition programs available?

This study seeks to answer these questions by investigating the economics of food stamps—the country's major food assistance program. This program has grown from $251 million in fiscal year 1969 to $4 billion (estimated) in fiscal year 1976, far outstripping the pace of inflation and tending to focus inflation on the food component of the price index. Chapter I examines the development of existing food stamp policy under the Food Stamp Act of 1964 and subsequent amendments. Chapter II analyzes the economic costs of the food stamp program, taking into account the direct and indirect costs of both federal and nonfederal food stamp organizations. Chapter III looks at the total benefits from the program, focusing particularly on the estimated relative gains to eligible recipients and the difficulty of determining program benefits. Chapter IV discusses alternative solutions to the problem of malnutrition and suggests possible remedies. The final chapter gives the major conclusions and recommendations of the study.

CHAPTER I

DEVELOPMENT OF FOOD STAMP POLICY

Changes in the structure of U.S. federal food assistance programs have closely paralleled changes in the relative strength of two powerful interest groups, farmers and welfare recipients, inasmuch as the structure of these programs determines the distribution of benefits to these groups and to other participants in the programs. As political power has moved from the midwestern and southern rural congressmen who represent farming interests to the northern and eastern urban congressmen who represent welfare interests, the primary gains from the program have shifted from farmers to welfare recipients.[1] Sometimes the conflict between farmers and welfare recipients becomes quite explicit, as it did in the testimony of Representative Leonor Sullivan (D-Missouri) before the House Agriculture Committee in 1968:

> If we have to have another fight, let's have it! But let's make it clear what the issue is going to be: if you won't let us use this method to assure adequate diets for all needy Americans wherever they live, then many of us from urban areas are simply going to withhold our votes on farm legislation until we make another deal.[2]

The enabling legislation for existing food assistance programs reflects these competing interests. Thus the statement of purpose of the Food Stamp Act of 1964 begins as follows:

> An Act to strengthen the agricultural economy; to help achieve a fuller and more effective use of food abundances; to provide for improved levels of nutrition among economically needy households through a cooperative Federal-State program of food assistance to be operated through normal channels of trade; . . .[3]

Early Food Stamp Programs

The first federal food stamp plan grew out of disenchantment with the surplus food distribution program. It began as an experiment in early 1939, and total participation reached approximately 4 million persons in 1941, with over half the nation's counties involved.[4] The 1939 plan was designed to increase food expenditures among participating families through the use of general and specific-purchase food stamps. Under the plan, each participating family would buy general food stamps (orange stamps) in amounts approximately equal to its normal food expenditure as determined by a national average. These stamps could be used to acquire any food item. In addition, each family was given specific-purchase food stamps (blue stamps) equal to half the total amount of orange stamps purchased. Blue stamps could be used only to purchase foods designated as surplus each month by the secretary of agriculture. Approximately thirty food commodities—including butter, cereal products, potatoes, dry beans, fresh vegetables, fresh and dried fruits, and pork meat products—were included on one or more of the monthly blue stamp lists. Participants were certified by relief agencies and were limited to individuals and families who were on some form of public assistance and who prepared meals at home.

The multiple objectives of the 1939 food stamp plan were given in official program descriptions:

> It broadens the market for food products, thus helping the farmer.
>
> It provides more adequate diets for needy families, thus helping the consumer and building up our national health defenses.
>
> It moves all surplus commodities through the regular channels of trade, thus helping business.[5]

While these objectives were partially met, several important problems plagued the plan throughout its operation.[6] First, many poor families were ineligible because they were not receiving some form of public assistance. Second, those who were eligible for the plan often found the minimum purchase requirements too expensive (that is, larger than their normal food expenditures). Third, nonfood items were sometimes exchanged for stamps and many nonsurplus foods were purchased with the blue (surplus food) stamps. These and other violations accounted for over 25 percent of expenditures under this program.[7] Finally, participants could reduce the intended demand-increasing impact of the blue stamps by not using the orange stamps to purchase surplus food. In other words, surplus foods purchased

with the blue stamps replaced food that would otherwise have been purchased, so that there was little increase in the total purchases of the surplus items. These problems, coupled with reduced unemployment and increased demand for U.S. food during World War II, contributed to the program's termination in 1943.

From 1943 to 1964, bills providing for a new food stamp program were introduced into every session of the Congress.[8] Until 1961, however, surplus commodity distribution continued to be the primary federal food assistance program. In January 1961 the President directed that governmental programs distributing surplus food to needy families be expanded,[9] and he instructed the secretary of agriculture to establish pilot food stamp programs for needy families.[10] The authorization for the pilot food stamp programs, like that for the 1939–1943 food stamp plan, was Section 32 of Public Law 74-320. Pilot projects were initiated in eight test areas and covered approximately 138,000 persons. The program was subsequently extended to thirty-five additional areas, bringing total participation in the pilot food stamp projects to 386,255 persons as of February 1964.[11]

Under the pilot program, certified families exchanged normal food expenditures (determined by a national average) for food coupons of a higher monetary value. For each $6 of normal food expenditures the family received approximately $10 in food coupons. The $4 difference was the federal contribution.[12] Participating families were allowed to use their food stamps at most stores and for most available foods. Purchases in nonapproved stores and purchases of certain imported foods were prohibited. Retailers redeemed the coupons through the facilities of the commercial banking system.

The 1964 Food Stamp Act and Amendments

Preliminary results of the 1961 pilot food stamp project showed increased food purchases and improved diets for participating families. These results provided favorable evidence for supporters of the food stamp concept and contributed to the passage of the Food Stamp Act of 1964. The conditions of the pilot project were not fully duplicated in the full scale program, however, and this may account for the latter's disappointing results. In the pilot projects an educational effort helped participants use their added food purchasing power to provide a more nutritious diet. Diligent enforcement of regulations prevented many violations, such as selling coupons for cash. Also, the scale of subsidy in the pilot programs averaged less than 60 percent of direct outlays, bringing into play a

self-selection process which weeded out those who did not feel any need for additional food.

With the recent rise in the average subsidy to 120 percent of direct outlays, a larger portion of eligible families is now participating in the program, even though the subsidy is of little value to many of the new participants except for illegal uses. Yet, despite this extraordinarily large subsidy, bonus food stamps evidently still have zero value (or a value that is less than the trouble of applying) to more than half of the families eligible to receive them (Table 10). It may be noted that this also held true for the relatively needier groups allowed to participate in the 1961 pilot programs: only half of those who had been receiving free food from direct donation of agricultural surpluses elected to join the pilot food stamp plan, although all were eligible and all were carefully informed of their eligibility.[13]

As was the case with previous food assistance legislation, passage of the 1964 act was delayed until a compromise could be worked out between agricultural and welfare interest groups. The President's 1963 farm legislation package included a food stamp bill, but the bill was tabled in the Agriculture Committee of the House of Representatives. The 1964 bill was not reported until "Northern Democrats on the House Rules Committee made it known they were holding up a tobacco bill pending favorable action on a food stamp bill."[14]

Under the provisions of the Food Stamp Act of 1964, the initiative for the establishment of a food stamp program in any local political jurisdiction must come from the agency authorized to administer public assistance programs in that jurisdiction.[15] Acceptance or rejection of proposed food stamp plans is made by the secretary of agriculture. Until the 1971 amendments to the act, food stamp programs could not be operated simultaneously with commodity distribution programs in any jurisdiction, except under emergency situations (determined by the secretary of agriculture). Also, program eligibility was limited to households that participated in public assistance programs or that fell below the maximum income and asset eligibility standards used by the state in administering federal public assistance. In 1966 these state eligibility standards varied considerably, as may be seen in Table 1. Households desiring to participate would apply to the local welfare agency that determined eligibility.

Moreover, program participants were required to purchase food coupons for an amount equal to the household's monthly expenditures for food. These food coupons would be exchanged for food

Table 1

FOOD STAMP PROGRAM:
ELIGIBILITY STANDARDS FOR NONASSISTANCE HOUSEHOLDS, 1966[a]

State	Monthly Allowable Income, by Household Size											Resources—Allowable Liquid Assets[b]
	1	2	3	4	5	6	7	8	9	10	For each additional person	
Alaska[b]	$125	$185	$250	$315	$370	$430	$475	$520	$565	$610	$45	Same as for public assistance.
Alabama[d]	100	120	145	175	205	235	265	295	325	350	$30	4 times monthly scale.
Arkansas[d]	85	170	180	190	200	210	220	235	250	265	$15 to maximum of $325	1—$200; 2 or more—$400.[c]
California[d]	160	190	225	283	335	393	438	483	521	565	$40	1—$1,000; 2 or more—$1,500.
Colorado[d]	100	150	185	220	255	290	325	360	395	420	None	1, 2, 3—$1,000; add $250 each to maximum of $2,000.[c]
Connecticut[e]	140	185	235	280	335	365	395	420	445	470	$25	1—$1,000; 2 or more—$1,500.
District of Columbia[d]	107	153	198	226	254	283	311	339	367	396	$25	1—$1,000; 2 or more—$1,500.
Georgia[d]	80	130	175	195	225	245	260	275	290	300	$30 to maximum of $330	1—$800; 2 or more—$1,600.
Hawaii[d]	120	180	210	250	285	325	370	415	455	495	$40	1—$1,000; 2 or more—$1,500.
Illinois	139	182	212	259	299	437	375	414	451	490	$25	1—$400; 2 or more—$600.
Indiana	125	160	190	220	250	280	310	340	370	400	$25	3 times monthly scale.
Iowa	130	200	250	295	330	370	405	455	490	540	$35	1—$750; 2—$900; 3—$1,000; 4—$1,100; 5—$1,200; 6—$1,300; 7—$1,400; 8—$1,500; 9, 10 and over—$1,550.
Kansas	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)		1—$750; 2 or more—$1,250.[c]
Kentucky[d]	90	125	145	165	190	210	220	230	240	250	$10	4 times monthly scale.
Louisiana[d]	90	105	125	150	175	190	210	230	250	275	$20	1—$500; 2 or more—$1,000.[c]
Maine	130	161	191	217	239	260	282	304	316	321	11—$325; $5	1—$1,000; 2 or more—$1,200.
Maryland	90	125	150	175	210	230	250	270	290	310	$20	1—$1,000; 2 or more—$1,500.
Michigan	125	185	225	265	295	330	365	400	435	470	$35	1—$750; 2 to 5—$1,000; 6 and over—add $100 each.

Table 1 *(continued)*

State	Monthly Allowable Income, by Household Size											Resources—Allowable Liquid Assets[c]
	1	2	3	4	5	6	7	8	9	10	For each additional person	
Minnesota	$135	$205	$250	$290	$335	$370	$390	$425	$460	$495	$30	1—$750; 2 or more—$1,000.
Mississippi[e]	90	130	155	180	210	230	250	270	290	310	$15	1—$500; 2 or more—$800.
Missouri[d]	140	190	230	270	310	350	390	430	470	510	$40	1—$750; 2—$1,000; 3—$1,250; 4 or more—$1,500.
Montana[c]	125	183	212	253	290	318	353	388	413	438	$25	1—$1,000; 2 or more—$1,500.
Nebraska	120	180	230	270	305	335	360	385	410	435	$25	1—$750; 2 or more—$1,500.
New Jersey	150	200	250	290	330	360	390	430	460	500	$40	1—$1,000; 2 or more—$1,500.
New Mexico[d]	110	150	170	190	210	230	250	270	290	310	$20	Cash: 1—$100; 2 or more—$150.[c]
New York	150	210	290	325	365	405	445	485	525	565	$40	3 times maximum allowable income.[c]
North Carolina[d]	85	110	125	140	155	170	185	195	205	215	$5 to maximum of $240	1—$500; 2—$700; add $50 each to maximum of $800.
North Dakota	140	185	260	295	330	365	385	415	440	460	$25	$1,000 per household.
Ohio	110	180	220	260	290	320	355	385	415	445	$30	$500 per household.
Oregon	128	193	221	258	288	328	357	386	411	426	$25	1 adult—$500; 2 or more—$1,000.
Pennsylvania	110	170	205	245	280	315	350	390	425	460	$30	1—$1,000; 2 or more—$1,500.
Rhode Island	110	150	180	215	255	290	320	345	370	395	$25	1—$1,000; 2 or more—$1,500.
South Carolina[d]	70	90	105	115	125	135	145	155	165	175	$5 to maximum of $185	4 times monthly scale.
Tennessee	95	130	165	200	240	275	315	350	385	420	None	1—$500; 2 or more—$1,000.
Texas	100	150	170	190	210	230	250	270	290	310	$15	1—$300; 2—$450; add $50 per person to maximum of $600.[c]
Utah	104	154	184	205	235	255	284	298	316	329	$13	1—$400; 2 or more $800.[c]
Vermont	122	180	209	238	275	309	345	374	407	439	$30	1—$1,000; 2 or more—$1,500.

Virginia	90	115	135	150	165	180	195	210	225	240	$5	1—$500; 2—$600; 3 or more—add $50 each to maximum of $1,000.[c]
Washington	136	172	212	242	271	297	329	360	390	420	$30	1—$336; 2—$572; 3—$612; 4—$462; 5—$671; 6—$697; 7—$729; 8—$760; over 8—add $30 each.
West Virginia	80	115	135	155	170	185	200	200	200	200	None	1—$1,000; 2 or more—$1,500.
Wisconsin	115	170	205	240	270	320	350	380	410	440	$30	1—$500; 2—$750; add $100 each additional.
Wyoming	130	180	225	280	310	340	370	415	460	500	None	$1,000 per household.[c]

[a] This table lists standards in state plans approved as of July 15, 1966.

[b] Rent up to maximum of $75 is also allowed.

[c] The states indicated also have limitations on other resources such as real estate, automobiles, etc.

[d] For households containing both public assistance recipients and nonrecipients, eligibility is based on the income and resources of the nonassistance members only. Other states base eligibility on the total income and resources of all members.

[e] Applied to both public assistance and nonpublic assistance households.

[f] Household eligible if a budget deficit exists.

Source: U.S. Congress, House of Representatives, Committee on Agriculture, *Hearings on Extend the Food Stamp Act of 1964 and Amend the Child Nutrition Act of 1966,* 90th Congress, 1st session, March 15 and 16, 1967, pp. 31–32.

stamps with a dollar value sufficient to enable participants "more nearly to obtain a low-cost nutritionally adequate diet." [16] Participating households could designate an authorized member to purchase monthly stamp allotments. Food stamps could be used at any approved retail food store for any food or food product except alcoholic beverages, tobacco, imported packaged foods, and imported meats or meat products. Retailers would redeem the stamps at a local bank or use them to pay accounts with approved food wholesalers.

The Food Stamp Act has been amended many times, most importantly in 1971, 1973 and 1974.[17] The 1971 amendments (Public Law 91-671) made important administrative changes and generally increased the benefits for participating households. Uniform income and resource eligibility standards were imposed, work registration requirements for able-bodied adults were instituted, and households that moved to a new political jurisdiction could maintain eligibility for sixty days following their move. Participating families were permitted to purchase one-fourth, one-half, or three-fourths of their monthly stamp allotment. Moreover, for most participating households, monthly purchase requirements were lowered to a level not to exceed 30 percent of income, and sometimes to zero for the lowest-income households. The 1971 amendments also allowed some elderly participants to purchase meals prepared and delivered to their homes by governmental and nonprofit organizations. Persons on other public assistance programs could request that the monthly purchase be automatically deducted from their welfare checks and could have the food coupons mailed to their home. Participating jurisdictions were required to "advertise" and to engage in other "outreach activities" to increase participation among the eligible poor. States were no longer prohibited from simultaneous distribution of food stamps and surplus commodities in any single political jurisdiction. Table 2 summarizes these and other key changes contained in Public Law 91-671.

The 1973 amendments (Public Law 93-86) required a nationwide expansion of the food stamp program by July 1974, unless a state could demonstrate that the participation of a particular area within that state would be impracticable. The amendments also required that the coupon allotment be adjusted semiannually to reflect changes in food prices as reported by the Bureau of Labor Statistics of the Department of Labor. Eligible participants who are drug addicts or alcoholics in rehabilitation programs may now use food coupons to purchase meals from authorized nonprofit organizations.

Table 2

COMPARISON OF MAJOR PROVISIONS OF PUBLIC LAW 91-671 AND PUBLIC LAW 88-525

Item	Public Law 88-525	Public Law 91-671
Policy of program	Raises levels of nutrition among low-income households.	Permits low-income households to purchase a nutritionally adequate diet.
Territorial coverage	50 states only and District of Columbia.	Includes Puerto Rico, Guam, and the Virgin Islands.
Individual coverage	Group of related or nonrelated individuals living as one economic unit sharing cooking facilities and for whom food is customarily purchased in common. Not residents of institutions or boarding houses.	Extends program to persons over 60 years of age who do not live in institutions or a boarding house. Excludes communal families of unrelated individuals.
Product coverage	Any food or food product except alcoholic beverages, tobacco, imported packaged foods, and imported meats or meat products.	Expands program to include meals prepared by nonprofit institutions and purchased by persons over 60 years of age if meals are delivered to their homes.
Store coverage	Establishment of house-to-house trade route that sells food to households for home consumption.	Expands program to include political subdivisions and private nonprofit institutions which prepare and deliver meals to persons 60 years of age or older.
Income eligibility	States set standard on maximum income, must be consistent with income standard used by state in own welfare program.	Secretary of Agriculture to establish uniform standards in consultation with HEW. Households containing an 18-year-old who is taken as a tax dependent by another household are ineligible. Secretary directed to establish separate standards for Puerto Rico, Guam, and the Virgin Islands.
Resource limitation on eligibility	State agency to determine.	Secretary to consider both liquid and nonliquid assets in establishing eligibility criteria.
Method of certification	General procedure used in public assistance programs; use of state merit-system personnel used in certification.	Households containing able-bodied persons between 18 and 65 (except mothers or students) who refuse to register for or accept employment (struck plants excepted) shall be ineligible for stamps.
Challenge to certification	No specific provision.	State agency to grant fair hearing and prompt determination to any aggrieved household affected in participation.
Penalties	Criminal offense to knowingly acquire coupons in unauthorized manner.	Extends criminal provision to include illegal possession or use of "authorization to purchase" cards; authorizes purchase of stamps for enforcement purposes.

Table 2 (continued)

Item	Public Law 88-525	Public Law 91-671
Place of coupon issuance	State agency responsible for making issuance arrangements may delegate to other agencies of local governmental units.	Same as present law.
Frequency of coupon issuance	No specific provision. Department regulation requires at least semi-monthly issuance for households that receive income on weekly or semi-monthly basis.	Requires secretary to provide opportunity to purchase less than full allotment but only in proportion to normal authorization.
Method of coupon purchase	Transfer for cash.	Cash or deduction of charge by state from federally aided public assistance payments when authorized by households.
Price of coupons	Amount equivalent to household's normal expenditure for food.	Cost of stamps to be a reasonable investment, but no more than 30 percent of household's income. Payment may be made by outside sources including state agencies and charitable institutions.
Total value of coupons	Such amount as will provide household with an opportunity more nearly to obtain a low-cost nutritionally adequate diet.	Amount which secretary determines is necessary to obtain a nutritionally adequate diet.
Federal administrative responsibility	Secretary of agriculture	No change.
State and local administrative responsibility	State welfare agency is responsible for intrastate administration.	No change.
Payment of administrative costs	Federal government finances cost of bonus coupons and their printing and 62.5 percent of travel and salaries of state personnel engaged in certifying nonassistance households.	Same as in present law plus 62.5 percent of cost of hearing officials and outreach personnel.
Simultaneous commodity distribution and food stamp issuance	Not unless emergency situation caused by a natural or other disaster as determined by secretary, interpreted to exclude long-term nonnatural disasters.	Simultaneous operation of food stamp and commodity program is authorized in case of (1) emergency situations; (2) during transition to food stamps; or (3) on request of the state agency subject only to prohibition that individual participants shall not benefit from both programs simultaneously.
Program outreach	No specific requirement.	State agency must undertake effective action to inform poor of program's availability and benefits and ensure their participation, including use of services of other federally funded organizations.

Table 2 *(continued)*

Item	Public Law 88-525	Public Law 91-671
Education	Administrators should take steps, including the coordination of other bodies' informational efforts, to ensure that participants obtain staple foods, particularly those in abundant or surplus supply.	No change.

Source: United States Code, *Congressional and Administrative News*, 91st Congress, 2d session, 1970, vol. 3, pp. 6032–6033 and 6051–6053.

More recent 1974 amendments (Public Law 93-347) increased federal subsidies for costs incurred by states and localities in administrating the food stamp program. Prior to October 1, 1974, states were reimbursed for 62.5 percent of their costs for certification of non-public assistance households, fair hearings and outreach activities. Under the new amendments states will receive 50 percent of *all* operating costs incurred in carrying out the food stamp program. These and other changes in the regulations governing the food stamp program have produced significant increases in total household and area participation, as well as in program costs.

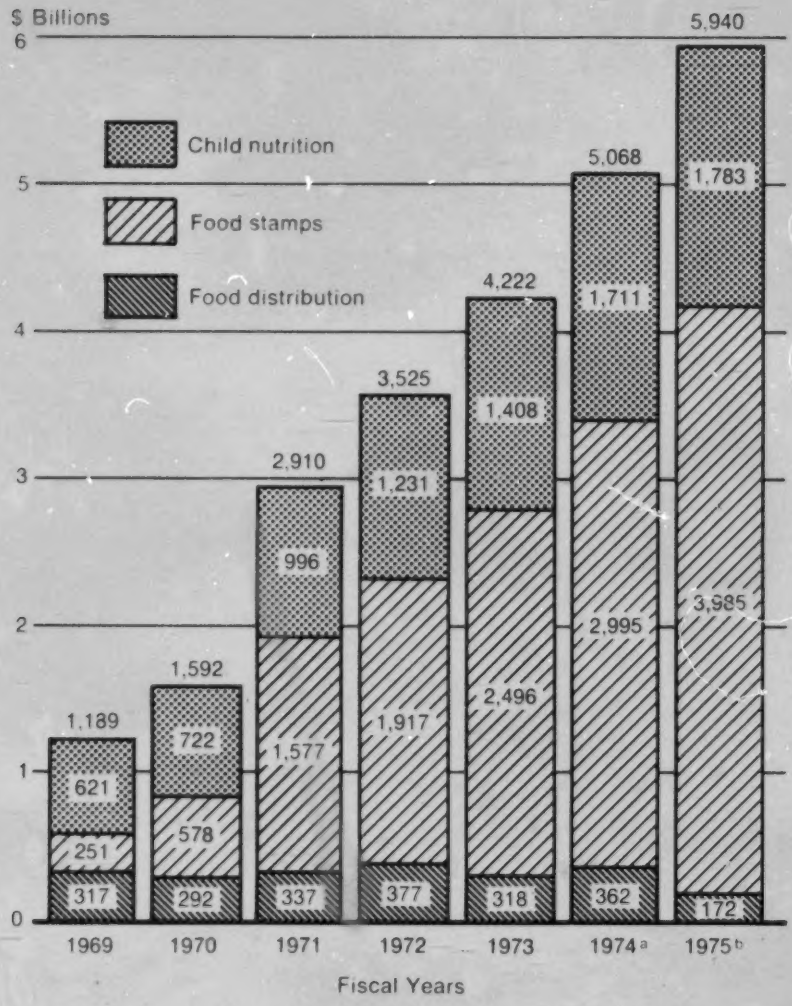
Growth of the Food Stamp Program

In recent years, the food stamp program has grown from the smallest to the largest of the federal food programs. As Figure 1 demonstrates, the growth from fiscal year 1969 to 1974 was over tenfold.

From fiscal year 1965 (the first year of direct appropriations for the food stamp program) to fiscal year 1974, the number of persons participating in the food stamp program grew from 424,000 to 13,536,000—an increase of 3,090 percent. Contributing to this increase were the federal and state efforts to expand participation in the program and the increased benefits for participation. For example, federal administration expenditures, which are an indicator of expanded participation, increased from $1.4 million in 1965 to $28.6 million in 1974, and "outreach" costs rose sharply beginning with fiscal 1971. In addition, lowered purchase requirements raised the average bonus (food stamp allotment less purchase requirement) from 61 percent in fiscal year 1965 to 137 percent in fiscal year 1974. Also, the options for participants were widened by permitting households to choose less than the total monthly allotment. These and other federal and state activities resulted in an eighty-threefold

Figure 1

FOOD PROGRAM FUNDING, 1969–1975



[a] Estimated

[b] Budget request

Source: U.S. Congress, House of Representatives, Subcommittee on Agriculture-Environmental and Consumer Protection, *Hearings on Appropriations for Fiscal Year 1974 Agricultural Programs*, 93rd Congress, 1st session, part 2, p. 637, and *Hearings on Appropriations for Fiscal Year 1975 Agricultural Programs*, 93rd Congress, 2d session, part 3, pp. 656-57.

increase in the federal food stamp bonus from fiscal year 1965 to fiscal year 1974 and, in the same period, extended the program from 110 areas to 2,818. Current budget estimates indicate that there will be a further expansion of this federal food assistance program to more than $3.6 billion in fiscal year 1976.[18] (This figure reflects the Ford administration's proposed increase in purchase requirements.)

Current Food Stamp Policy

Households now participating in a food stamp program must meet certain eligibility requirements and specific purchase requirements, and must adhere to general purchase responsibilities. To be eligible for food stamps, households must either receive public assistance or be below maximum income and resource levels. Maximum monthly income and resource levels are given in Table 3. Current regulations prohibit participation by college or university students (who have reached their eighteenth birthday) who are claimed as dependent children for federal income tax purposes by a taxpayer who is not a member of an eligible household. Participating households must consist of a group of persons, excluding roomers, boarders and live-in attendants, who are living as one economic unit. Except for disabled elderly persons, drug addicts, or alcoholics (who qualify for a delivered meals program), households must cook their own food at home. Finally, all household members who are able-bodied and over eighteen must register for employment and accept it if offered.

The number of eligible household members determines the value of the food coupons that the participating household is permitted to purchase. In January 1975, for example, a family of four could receive a monthly allotment of $154 in food coupons by participating in the program (see Table 4). Purchase requirements (the amounts the household pays for monthly allotments) increase as household income increases. Thus a family of four with an adjusted monthly income of $300 would pay $83 for the full monthly allotment, whereas the payment would drop to $25 for adjusted monthly incomes between $100 and $109. The bonus coupons represent the difference between the purchase requirement and the food stamp allotment. For example, the monthly bonus for a family of four with an adjusted monthly income of $100 would be $129 (that is, $154 − $25 = $129). A participating household is permitted to purchase one-quarter, one-half, or three-quarters of the total allotment instead of the full allotment. Participants who receive welfare checks may elect to have the purchase requirement deducted from their

Table 3

FOOD STAMP PROGRAM: MAXIMUM MONTHLY INCOME AND RESOURCE ELIGIBILITY LEVELS, JANUARY 1975

Household Size	Forty-eight States and D.C.	Alaska	Hawaii
		Monthly income[a]	
1	$194	$229	$218
2	280	380	360
3	406	546	520
4	513	693	660
5	606	826	786
6	700	946	900
7	793	1,066	1,013
8	886	1,186	1,120
For each additional person, add:	73	100	93
		Resources[b]	
All households	1,500	1,500	1,500

[a] Income is any money received by all members of the household, except students under 18 years old, including wages, public assistance, retirement, disability benefits, pensions, veterans', workmen's or unemployment compensation, old-age, survivors, or strike benefits, support payments, alimony, scholarships, educational grants, fellowships and veterans' educational benefits, dividends, interest, and all other payments from any sources which may be considered a gain or a benefit. Certain expenses can be deducted from income, including (1) such mandatory expenses as local, state and federal income taxes, social security taxes under FICA, retirement, and union dues; (2) medical costs (but not special diets) when above $10 a month, child care when necessary in order to work, fire, theft, hurricane or other disaster expenses, educational expenses which are for tuition and mandatory school fees, and court-ordered support and alimony; and (3) rent, utilities or mortgage payments above 30 percent of income after all other deductions.

[b] Included resources are such liquid assets as cash on hand, in banks or other savings institutions, U.S. savings bonds, stocks and bonds and such nonliquid assets as buildings (except certain excluded property). Excluded resources include home, one car, unlicensed vehicle, life insurance policies, income-producing real estate, vehicle required for employment purposes, tools and machinery, and certain other real or personal property. Each single person household is allowed up to $1,500 in resources. For households of two or more persons or with a member age 60 or over, resources may not exceed $3,000.

Source: U.S. Department of Agriculture, Food and Nutrition Service.

welfare payments and, if they choose the full monthly allotment, to have the stamps mailed to them. Otherwise food stamps must be purchased at an authorized outlet.

Participating households are permitted to use food coupons to buy any approved food (or plants and seeds used to produce food

Table 4

FOOD STAMP PROGRAM: MONTHLY COUPON ALLOTMENTS AND PURCHASE REQUIREMENTS FOR THE FORTY-EIGHT CONTIGUOUS STATES AND WASHINGTON D. C., JANUARY 1975

Monthly Net Income	For a Household of—							
	1 Person	2 Persons	3 Persons	4 Persons	5 Persons	6 Persons	7 Persons	8 Persons[a]
	The Monthly Coupon Allotment Is—							
	$46	$84	$122	$154	$182	$210	$238	$266
	And the Monthly Purchase Requirement Is—							
$ 0 to 19.99	0	0	0	0	0	0	0	0
$ 20 to 29.99	1	1	0	0	0	0	0	0
$ 30 to 39.99	4	4	4	4	5	5	5	5
$ 40 to 49.99	6	7	7	7	8	8	8	8
$ 50 to 59.99	8	10	10	10	11	11	12	12
$ 60 to 69.99	10	12	13	13	14	14	15	16
$ 70 to 79.99	12	15	16	16	17	17	18	19
$ 80 to 89.99	14	18	19	19	20	21	21	22
$ 90 to 99.99	16	21	21	22	23	24	25	26
$100 to 109.99	18	23	24	25	26	27	28	29
$110 to 119.99	21	26	27	28	29	31	32	33
$120 to 129.99	24	29	30	31	33	34	35	36
$130 to 139.99	27	32	33	34	36	37	38	39
$140 to 149.99	30	35	36	37	39	40	41	42
$150 to 169.99	33	38	40	41	42	43	44	45
$170 to 189.99	36	44	46	47	48	49	50	51

Table 4 *(continued)*

Monthly Net Income	For a Household of—							
	1 Person	2 Persons	3 Persons	4 Persons	5 Persons	6 Persons	7 Persons	8 Persons[a]
	The Monthly Coupon Allotment Is—							
	$46	$84	$122	$154	$182	$210	$238	$266
	And the Monthly Purchase Requirement Is—							
$190 to 209.99	38	50	52	53	54	55	56	57
$210 to 229.99		56	58	59	60	61	62	63
$230 to 249.99		62	64	65	66	67	68	69
$250 to 269.99		64	70	71	72	73	74	75
$270 to 289.99		64	76	77	78	79	80	81
$290 to 309.99			82	83	84	85	86	87
$310 to 329.99			88	89	90	91	92	93
$330 to 359.99			94	95	96	97	98	99
$360 to 389.99			100	104	105	106	107	108
$390 to 419.99			104	113	114	115	116	117
$420 to 449.99				122	123	124	125	126
$450 to 479.99				130	132	133	134	135
$480 to 509.99				130	141	142	143	144
$510 to 539.99				130	150	151	152	153
$540 to 569.99					154	160	161	162
$570 to 599.99					154	169	170	171
$600 to 629.99					154	178	179	180
$630 to 659.99						178	188	189
$660 to 689.99						178	197	198
$690 to 719.99						178	202	207

$720 to 749.99	202	216
$750 to 779.99	202	225
$780 to 809.99	202	226
$810 to 839.99		226
$840 to 869.99		226
$870 to 899.99		226

• For each additional household member over eight, add $22.00 to the eight-person allotment.

Source: U.S. Department of Agriculture, Food and Nutrition Service.

for personal consumption) at certified retail outlets through an authorized representative of the household. Persons in certain remote areas of Alaska may use food coupons to purchase hunting and fishing equipment (but not firearms, ammunition, and other explosives). The authorized representative must be able to present his food stamp identification card and must not separate individual coupons from the book before time of purchase. In addition, food stamps may not be sold, given away, or used to pay creditors. Changes in eligibility must be reported to the welfare agency operating the food stamp program.[19]

CHAPTER II

FOOD STAMP PROGRAM COSTS

The major federal outlay in the food stamp program is the value of the "bonus" food stamps (that is, the difference between the food stamp allotments and the purchase requirements of participating households). This bonus was $2.1 billion in fiscal year 1973, and it is expected to exceed $3.6 billion in fiscal year 1976. But in addition to the federal bonus (which is a purchasing-power transfer), there are other explicit and implicit costs of the program.

In fiscal year 1974, federal operating costs of the food stamp program other than the cost of the "bonus" stamps were approximately $137 million (see Table 5). These include the costs of administration, production and distribution, participant certification, outreach activities, and employment registration. Explicit federal operating costs, however, understate the actual operating costs of the food stamp program. For example, federal food stamp enforcement costs and many local government costs, including certification and outreach projects, are borne by the participating jurisdictions and do not appear as explicit federal operating costs. These additional federal, state, and local program costs are at least equal to, and probably greater than, the explicit costs. Estimates indicate that state and local food stamp operating costs were $111 million in 1973, or 30 percent higher than the food stamp operating costs for the federal government.[1] The total (federal and nonfederal) costs of administering the food stamp program were at least $196 million that year (see Table 5), a sum equal to approximately 9 percent of the federal bonus. Estimated total federal, state and local administrative and operating costs for fiscal year 1976 are expected to reach $512 million. This amount is significantly higher than previous

Table 5

FOOD STAMP PROGRAM: TOTAL ALLOTMENTS, PURCHASES, COSTS AND PARTICIPATION, FISCAL YEARS 1961–1976

Item	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975[a]	1976[a]
Bonus food stamps ($ millions)	.4	13.1	18.6	28.6	32.5	64.8	105.5	173.0	228.6	550.8	1,523.1	1,842.5	2,132.6	2,728.2	3,501.4	3,602.9
Purchased food stamps ($ millions)	.4	22.1	31.2	44.8	53.0	109.5	190.7	278.7	375.5	539.6	1,188.6	1,463.8	1,757.4	1,996.1	2,641.4	3,461.6
Total allotments[b]	.8	35.2	49.9	73.5	85.5	174.2	296.2	451.7	603.1	1,090.5	2,711.6	3,306.3	3,890.0	4,724.3	6,142.8	7,064.5
Percent bonus	100	59	60	64	61	59	55	62	61	102	128	126	121	137	133	104
Federal operating costs[c] ($ millions)																
Administrative	.2	.8	1.1	1.2	1.4	2.8	5.2	8.3	10.3	13.4	17.8	20.9	23.8	28.6	36.6	44.0
Certification and outreach	.0	.0	.3	.3	.6	1.6	3.0	4.3	6.6	9.3	20.2	26.7				
Production and distribution	.2	.2	.3	.3	.6	1.3	2.0	1.5	4.9	4.5	15.9	12.1	61.6	108.5	165.0	212.0
Employment registration	..	..	..	..	..	..	..	..	..	..	..	14.5				
Total[b]	.5	1.0	1.8	1.8	2.6	5.7	10.0	14.1	21.7	27.2	53.9	74.3	85.4	137.1	201.6	256.0
Nonfederal operating costs[d] ($ millions)	.5	1.0	1.8	1.8	2.6	5.7	10.0	14.1	21.7	27.2	53.9	74.3	111.0[e]	137.1	287.0[e]	256.0
Total operating costs[c] (federal & state) ($ millions)	1.0	2.0	3.6	3.6	5.2	11.4	20.0	28.2	43.4	54.4	107.8	148.6	196.4	274.2	488.6	512.0

Participation (thousands)															
Average	n.a.	143	226	367	424	864	1,447	2,211	2,878	4,340	9,368	11,103	12,153[f]	13,536[f]	15,800[f]	15,800[f]
Peak month	50	151	359	399	633	1,218	1,832	2,489	3,222	6,457	10,631	11,702	n.a.	n.a.	n.a.	n.a.
Public assistance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,452	1,985	3,702	6,237	7,255	n.a.	n.a.	n.a.	n.a.
Nonpublic assistance	n.a.	n.a.	n.a.	137	227	444	714	1,037	1,237	2,755	4,394	4,447	n.a.	n.a.	n.a.	n.a.
Project areas (cities and counties)	6	8	42	43	110	324	838	1,020	1,489	1,747	2,026	2,126	2,228[f]	2,818[f]	3,200[f]	3,200[f]

[a] Estimated; the figures for 1975 and 1976 reflect the proposed increase in purchase requirements.

[b] Totals may not add due to rounding.

[c] Excludes value of bonus stamps.

[d] Minimum based on sample studies and U.S. Department of Agriculture testimony.

[e] Estimate based on reports from 35 states.

[f] Year end.

n.a. = Not available.

Sources: U.S. Department of Agriculture, Food and Nutrition Service; Office of Management and Budget, *The Budget of the United States Government, 1975 and 1976;* and U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, *Food Program Technical Amendments*, 93rd Congress, 2d session, March 1974.

operating cost levels and represents approximately 14 percent of the federal bonus.

Unfortunately there is no extensive study of the total federal and nonfederal costs of administering the food stamp program. All estimates for specific local programs (whether based on the value of the bonus or on average cost per household participation) yield an operating cost approximating 9 percent of the federal bonus. On the basis of studies made for 1970, it may be concluded that annual local operating costs (excluding cost of office space and other overhead costs) range from $5.00 to $10.00 per participant.[2] Using an average of these estimated per participant operating costs and average yearly participation, one finds nonfederal operating costs totalling approximately 4.5 percent of the federal bonus for 1970.[3] Nonfederal costs plus explicit federal operating costs yield a figure equal to 9 percent of the federal bonus. More recent studies based on two California counties show that average per participant costs of administering the food stamp program have increased significantly since 1970. In 1971–1972, average annual county operating costs for Humboldt County were approximately $10.00 per participant and for Del Norte County $19.40 per participant.[4] The lower costs for Humboldt County may reflect scale economies in operating activities; however, these economies appear to be limited since average operating costs in Humboldt County have been rising with increased participation. While county operating costs do not include the fixed or common and other overhead costs of the food stamp program, they do represent a large proportion of the increased food purchasing power. In Del Norte County, for example, county operating costs amounted to 13 cents per $1.00 of bonus food coupons. Operating costs in Humboldt County were lower: it took $1.08 to transfer $1.00 in bonus food stamps (that is, operating costs were eight cents per $1.00 of bonus food stamps).[5]

While aggregate state and local food stamp program costs for all states are not available, testimony by the administrator of the Food and Nutrition Service, U.S. Department of Agriculture (based on a fiscal year 1973 study), indicates that in fiscal 1973 locally borne administrative costs of the program exceeded those borne by the federal sector. Indeed, the fiscal year 1973 study showed state and local costs at 130 percent of those for the federal government.[6] Thus, if the administrative explicit costs to the federal government for fiscal years 1969–1972 represent a minimum and the fiscal year 1973 state and local estimate is used, the average cost of transferring $1.00 in additional food purchasing power was $.09, on the basis of data for fiscal year 1969 through fiscal year 1973. This 9 percent adminis-

trative and operating cost is also consistent with what was found for the two California counties.

Of course, total operating costs for the food stamp program vary directly with the number of participants. Recent and suggested changes in administrative procedures (mandatory nationwide expansion and increased outreach activities to widen participation) will raise administrative costs.[7] In fiscal year 1970 approximately $12.53 was spent on producing, transferring, and redeeming bonus food stamps worth an average of $126.91 to each certified participant.[8] In fiscal year 1973, by which time many of the changes prescribed by the 1971 amendments had been instituted, it took $16.16 to transfer an average of $171.51 in bonus stamps to each participant. This represents a 29 percent increase in average federal and nonfederal participant operating costs.

Average participant administrative costs for the food stamp program can be estimated if one divides total (federal, state and local) costs by participation. In fiscal year 1973 (the year for which total costs are available), average yearly participant costs were $16.16 ($196.4/12.153 from Table 5). If these costs remain relatively constant from one year to the next, participant or household costs can be estimated for other years. In fiscal year 1972, for example, yearly administrative household costs would have been $50.53 ([$16.16] [11.1 million] = $179.4 million from Table 5 and $179.4 ÷ 3.55 million = $50.53 from Table 10) or $4.21 each month.

In addition to the direct costs of the food stamp program, there are the costs of enforcing the act's provisions, amendments, and resulting administrative regulations. These costs are less easily quantifiable than those already calculated because the activities involve separate agencies, such as the Office of the Inspector General of the U.S. Department of Agriculture, the Federal Bureau of Investigation, the Department of Justice, and state or local law enforcement agencies, which do not include food stamp enforcement in their specific agency accounts. Furthermore, because the food stamp program involves a transfer of resources in the form of specific purchasing power ("in kind"), it requires greater monitoring or enforcement commitments than a transfer program that distributes cash.

When an in-kind transfer program gives recipients more goods (or specific purchasing power) than could be purchased with unrestricted cash grants, there are strong incentives for the recipients to trade any excess of the in-kind resource (that is, any amounts greater than would be chosen with equivalent incomes) for goods of other kinds. Suppression of this activity, which in the case of food stamps has been identified as "trafficking in food coupons," is an

extremely difficult task." The greater the difference between the amount the participant wishes to spend on food and the total value of coupons available, the greater the gains from exchanging food coupons for other goods. Trafficking may take several forms—sale of the coupons directly, sale of the recipients' purchase authorization, or the trading of the coupons for nonfood items. There is little direct evidence on the extent of trafficking in food stamps, but it is known that food stamps have been used to purchase automobiles, minibikes, auto repairs and marijuana.[10] Furthermore, since food stamps usually sell at half their face value,[11] returns from trafficking could easily support "large-scale organized rings handling hundreds of thousands of dollars worth of coupons."[12]

The Office of the Inspector General of the U.S. Department of Agriculture has identified at least sixty additional problems—besides trafficking—in the enforcement of the food stamp program. These include problems in participant and trade compliance; participant certification and recertification, accountability, and security; and losses, thefts and counterfeiting.[13] On the basis of a 1972 study, it may be concluded that the more persistent irregularities, representing approximately 62 percent of the total reported infractions, are those associated with trade compliance by authorized food outlets.[14] These include sales of ineligible items, purchase of coupons for cash, and the giving of improper cash change. Another 22 percent of the irregularities involve problems of certification and recertification, ineligible participants, misrepresented facts, unreported changes in status, and inadequate action on violation complaints. During the first six months of fiscal year 1973, for example, there were 5,208 claims averaging $221 each against recipients for some form of fraud in the receiving of food stamps.[15] Failures of accountability in the managing of food coupons, including inadequate inventory controls and irregularities in other operating procedures, represent approximately 9 percent of the reported infractions.[16] The remaining 7 percent are largely made up of losses, thefts, counterfeiting, and inadequate security operations.

Individuals, especially those who are not on some other form of public assistance, and food industry establishments participating in the food stamp program also bear certain costs associated with the food stamp program. First, participants must apply for certification of eligibility for the program; and eligible households that do not receive some form of public assistance must supply detailed records on their members' income, taxes, retirement payments, medical expenses, child care, education tuition and fees, disaster and casualty losses, alimony, rent or mortgage payments, utilities,

real and personal property holdings and other resources in order to be certified for the food stamp program. Second, many participants must give up time and incur other expenses to obtain the food stamps at the distribution center. Third, all participants bear some additional costs (such as costs of food sorting and credit slips) from their transactions in this "specific purchase" money. Some of these costs are also borne by the participating food establishments. In the 1972 California study, increased costs from direct handling of food stamp transactions were estimated at approximately ½ of 1 percent of food stamp sales.[17]

Food stamp transactions also increase the cost of food purchases to nonparticipating food purchasers. Waiting time at food check-out counters is often significantly increased when food stamp sales are involved. These costs are attributable to the sorting of food into eligible and noneligible categories, to the checking of participant identification, to the endorsing of food stamps, and to issuance of credit slips.

Finally, there may be distortions in other economic activities resulting from the existing method of financing the food stamp program. Since revenues for any particular governmental program cannot be traced to a specific tax, debt, or other revenue source, the costs of these distortions cannot be identified. In general, however, the financing of any tax-supported program burdens the nation with a cost from which no one gains. The taxes imposed to finance the subsidy cause a reallocation of resources away from more productive uses where the tax burden is heavy to less productive uses where it is light. The result is a lower national and per capita income and, perhaps, a greater incidence of poverty than would prevail if transfers financed by taxes were not attempted.[18]

CHAPTER III

FOOD STAMP PROGRAM BENEFITS

The net benefits of the food stamp program are difficult to measure. Estimates of the benefits received by contributors to the program, the taxpayers, are at best subjective valuations incapable of being supported or refuted with existing information and institutions. Benefits to food producers and costs to nonparticipating food consumers, also hard to quantify, may be generally offsetting. If we can assume that they are, we eliminate the need for measuring them accurately. Benefits to recipients are more easily estimated.

Recipient Benefits

Direct beneficiaries of the food stamp program are of two kinds—agricultural producers and individuals who qualify to receive stamps. The program's structure and magnitude, however, generally ensure that the benefits to agricultural producers are secondary:

> Whatever is said about stamps increasing demand for farm products, that is only incidental to what must be the program's primary justification: to increase the volume of food that can be purchased by low income people without limiting freedom of selection among foods. If the program aids in the disposal of surpluses, it is only because holders of food stamps happen to choose to use them for items in surplus. If the program stimulates use of unused agricultural capacity, it is only because holders of food stamps happen to seek out food items for which there is unused capacity to produce. Which segment of American agriculture benefits from the food stamp plan is a decision that rests in the choices of the persons who hold and spend food

stamps. A program designed principally to aid the agricultural population would have to have both a good deal more money and some additional built-in assurances that the money will fall in the right places.[1]

A brief glance at the income statistics for the agricultural sector might seem to contradict this analysis of the probable impact of the food stamp program on the agricultural population. Table 6 shows that between 1962, the year the pilot food stamp program began, and 1973, per capita disposable personal income for the farm population grew from $1,308 to $3,913. More important, the differential between the farm and nonfarm sectors narrowed substantially. In the 1962–1973 period, per capita disposable income of farm families rose from 62 percent to 93 percent of nonfarm disposable personal income. Careful investigation of the possible causes for this improvement reveals that the food stamp program contributed little. Statistical tests show that other variables affecting the relation between the agricultural and nonagricultural sectors contributed more to changes in relative incomes than did the changes in federal food stamp spending.[2] When one considers that less than eleven cents

Table 6

U.S. PER CAPITA DISPOSABLE PERSONAL INCOME, FARM AND NONFARM POPULATION, 1962–1973

Calendar Year	Disposable Personal Income		Farm Income as a Percent of Nonfarm Income
	Farm	Nonfarm	
1962	$1,308	$2,128	61.5
1963	1,410	2,193	64.3
1964	1,462	2,343	62.4
1965	1,772	2,481	71.4
1966	1,985	2,643	75.1
1967	2,032	2,791	72.8
1968	2,200	2,985	73.7
1969	2,406	3,169	75.9
1970	2,610	3,414	76.4
1971	2,764	3,643	75.9
1972	3,182	3,847	82.7
1973	3,913	4,208	93.0

Source: U.S. Department of Agriculture, Economic Research Service, *Farm Income Situation*, FIS-222, July 1973, p. 50, and FIS-223, February 1974, p. 8.

of an additional dollar spent on food for home consumption becomes disposable personal farm income and that additional food purchasing power is more often spent on food convenience services, the fact that the food stamp program does not significantly raise agricultural incomes is not surprising.[3] The benefits of the food stamp program are overwhelmingly benefits received by participating welfare recipients.

To make estimates of benefits to welfare recipients requires making a number of underlying assumptions. Unless otherwise stated, it will be assumed here (1) that the food stamp program does not alter market prices, (2) that food stamps are not used for nonfood goods or services, and (3) that resale of food stamps is effectively prohibited. Even if these assumptions are made, precise measurement of aggregate benefits is not possible. Ideally, one would want to include the real purchasing-power level of the federal bonus, the participant's relative subjective valuation of eligible food items measured against his subjective valuation of other goods before and after the transfer, and the participant's real income before the bonus. Nevertheless, a good approximation of the value of the bonus can be obtained by calculations that use nominal income, bonus, and current prices and that specify a representative functional relationship for the subjective value of food and nonfood items.

With the necessary assumptions made, the participant's bonus (the difference between the market value of the food stamps and the amount of the purchase requirement) can be divided into three parts: (1) a transfer in general purchasing power, (2) a transfer in specific or food purchasing power, and (3) an amount which to the recipient measures waste (see Appendix A). The transfer in general purchasing power is the difference between the recipient's expenditure on food in the absence of the food stamp program and the purchase price of the food coupons (*BC* in Figure A-2, Appendix A). Since the monthly food stamp allotments and purchase requirements as developed in 1965 were supposed to correspond to the market price of a nutritious diet and to previous food expenditures, respectively, no transfer in general purchasing power was intended. Specific purchasing power is defined as the difference (*CD* in Figure A-2) between the recipient's subjective valuation of the food stamps he receives (the dollar amount he would voluntarily accept in place of the bonus portion of the food stamp allotment) and the value of the general purchasing-power transfer (from the food stamp program). If the subjective valuation placed on bonus food stamps is lower than the market value of the food stamps, there is waste equal

Table 7

ANALYSIS OF FOOD STAMP BENEFITS, BY INCOME CLASS AND HOUSEHOLD SIZE, JUNE 1972

Monthly Income	Size of Bonus (Estimated Waste) General Purchasing Power + Specific Purchasing Power				
	1 person	2 persons	3 persons	4 persons	5 persons
Under $29	$31.00(11.32) 3.95 + 15.73	$59.00(31.33) 3.95 + 23.72	$88.00(52.29) 4.95 + 30.76	$108.00(68.75) 4.95 + 34.30	$128.00(85.62) 4.95 + 37.43
$30–$39	28.00(3.93) 7.55 + 16.52	56.00(18.32) 7.55 + 30.13	84.00(36.53) 7.55 + 39.92	104.00(50.76) 7.55 + 45.69	123.00(66.70) 6.55 + 49.75
$40–$49	26.00(2.11) 8.85 + 15.04	53.00(14.70) 7.85 + 30.45	81.00(31.47) 7.85 + 41.68	101.00(44.86) 7.85 + 48.29	120.00(59.93) 6.85 + 53.22
$50–$69	23.00(0.55) 10.80 + 11.65	49.00(10.23) 8.80 + 29.97	76.00(25.46) 7.80 + 42.74	96.00(37.73) 7.80 + 50.47	115.00(51.66) 6.80 + 56.54
$70–$99	18.00(0.00) 14.05 + 3.95	42.00(5.19) 10.05 + 26.76	69.00(17.17) 9.05 + 42.78	88.00(28.09) 8.05 + 51.86	108.00(39.73) 8.05 + 60.22
$100–$149	10.00(0.00) 10.00 + 0.00	31.00(1.00) 12.25 + 17.75	58.00(8.35) 11.25 + 38.40	77.00(16.46) 10.25 + 50.29	95.00(26.56) 8.25 + 60.19
$150–$249	—	20.00(0.00) 20.00 + 0.00	36.00(0.94) 14.00 + 21.06	55.00(4.65) 13.00 + 37.35	74.00(10.42) 12.00 + 51.58
$250–$359	—	—	18.00(0.00) 18.00 + 0.00	30.00(0.00) 22.65 + 7.35	44.00(1.03) 16.65 + 26.32
$360–$419	—	—	—	24.00(0.00) 24.00 + 0.00	32.00(0.00) 32.00 + 0.00
$420–$479	—	—	—	—	28.00(0.00) 28.00 + 0.00
$480–$539	—	—	—	—	—
$540 and up	—	—	—	—	—

Monthly Income	Size of Bonus (Estimated Waste) General Purchasing Power + Specific Purchasing Power			
	6 persons	7 persons	8 persons	9 persons
Under $29	$148.00(102.80) 4.95 + 40.25	$164.00(116.73) 4.95 + 42.32	$180.00(130.78) 4.95 + 44.27	$196.00(144.95) 4.95 + 46.10
$30–$39	143.00(82.22) 6.55 + 54.23	159.00(94.92) 6.55 + 57.53	175.00(107.83) 6.55 + 60.62	191.00(120.92) 6.55 + 63.53
$40–$49	140.00(74.77) 6.85 + 58.38	156.00(86.97) 6.85 + 62.18	172.00(99.41) 6.85 + 65.74	188.00(112.06) 6.85 + 69.09
$50–$69	135.00(65.61) 6.80 + 62.59	150.00(78.06) 5.80 + 66.14	166.00(89.95) 5.80 + 70.25	182.00(102.07) 5.80 + 74.13
$70–$99	127.00(52.87) 7.05 + 67.08	143.00(63.39) 7.05 + 72.56	158.00(75.04) 6.05 + 76.91	174.00(86.25) 6.05 + 81.70
$100–$149	114.00(37.55) 7.25 + 69.20	129.00(47.15) 6.25 + 75.60	144.00(57.29) 5.25 + 81.46	160.00(67.25) 5.25 + 87.50
$150–$249	93.00(17.75) 11.00 + 64.25	108.00(24.59) 10.00 + 73.41	123.00(32.11) 9.00 + 81.89	139.00(39.81) 9.00 + 90.19
$250–$359	63.00(4.06) 15.65 + 43.29	78.00(7.67) 14.65 + 55.68	93.00(12.14) 13.65 + 67.21	109.00(17.15) 13.65 + 78.20
$360–$419	46.00(0.09) 26.70 + 19.21	56.00(1.38) 20.70 + 33.92	72.00(3.51) 20.70 + 47.79	88.00(6.45) 20.70 + 60.85
$420–$479	38.00(0.00) 38.00 + 0.00	48.00(0.00) 32.50 + 15.50	64.00(0.46) 32.50 + 31.04	80.00(1.83) 32.50 + 45.67
$480–$539	32.00(0.00) 32.00 + 0.00	39.00(0.00) 39.00 + 0.00	55.00(0.00) 43.30 + 11.70	71.00(0.07) 43.30 + 27.63
$540 and up	—	36.00(0.00) 36.00 + 0.00	42.00(0.00) 42.00 + 0.00	58.00(0.00) 58.00 + 0.00

Source: See Appendix B.

to the difference between the market value and the recipient's subjective value of the food coupons (*DE* in Figure A-2).

To illustrate, let us consider a family of four with a monthly disposable income of $125 participating in the food stamp program during June 1972. Each month the family would exchange $31 for food stamps worth $108, receiving a bonus of $77. Budgetary studies indicate that this family, if it is typical, would spend $41.25 of its $125 income on food in the absence of the food stamp program.[4] Consequently the monthly transfer in general purchasing power is $10.25 ($41.25 − $31.00). That is, this family would have spent $41.25 of its monthly income on food, but it can now obtain this amount of food (and more) with the food stamps it purchased for $31.00. Consequently the family has saved $10.25 that can be used to purchase anything it wishes.

Determination of the remaining parts of the bonus (specific purchasing power and waste) requires knowledge of the subjective value the recipient places on the bonus food stamps. While the precise value cannot be found, recent advances in estimating consumer preferences permit estimates of subjective valuation of specific or in-kind transfers.[5] If the proportion of each family's disposable income spent on food (see Appendix B) does not vary greatly with income and prices, then an estimate can be made of the subjective value of the bonus food stamps by family size and income. (See Appendix B for the explanation of this procedure, the methods of computation, and the indirect tests for the validity of the estimates.) For a family of four with a monthly income of $125 in June 1972, the subjective valuation (recipient benefits) of the $77 monthly food stamp bonus was estimated to be $60.54. This implies that the family would rather have $60.55 in cash than the $77 food stamps' bonus. (The family is indifferent between $60.54 in cash and the $77 in food stamps.)[6] The specific purchasing power for this family is $50.29 ($60.54 − $10.25). The remainder of the bonus, $16.46 ($77.00 − $60.54), from the recipient's viewpoint is waste. For this family, then, the $77 monthly food stamp bonus can be divided into (1) a transfer in general purchasing power of $10.25, (2) a transfer in specific or food purchasing power of $50.29, and (3) waste of $16.46 ($77.00 = $10.25 + $50.29 + $16.46).

These amounts are shown in Table 7, column 4, row 6. Bonus values, estimates of recipient benefits (general purchasing power plus specific or food purchasing power), and estimates of waste for other family sizes and incomes for June 1972 are also shown there. For example, a family of five with an income of $125 (column 5, row 6) receives a monthly bonus of $95 in food stamps which it values at

$68.44 ($8.25 in general purchasing power plus $60.19 in specific or food purchasing power). For this family the waste is $26.56.

An investigation of the potential benefits (food stamp bonus) and the actual benefits of the program reveals several interesting data. First, participation in the food stamp program is more closely related to the estimated recipient benefits than the potential benefits or food stamp bonus. (See Appendix B for the method of testing this relationship.) This outcome implies that the government could significantly lower program costs without lowering recipient benefits by giving participants a cash food allowance equal to the estimated benefits. Second, the bonus structure for June 1972 in Table 7 shows a significantly smaller bonus for higher incomes than for lower incomes. On the other hand, actual benefits (from the recipient's viewpoint) by income class generally rise with higher incomes, as shown in Table 8. This occurs because participating families would voluntarily choose to spend more on food as their incomes rise—thereby reducing waste. In Table 7, estimated waste for a seven-person household declines from $116.73 in the lowest income class to $0.00 for a monthly income of $450. For lower income classes,

Table 8

DISTRIBUTION OF BENEFITS AMONG FOOD STAMP RECIPIENTS, BY INCOME CLASS, JUNE 1972

Monthly Income	Mean Monthly Benefits [a]	Percentage Increase in Income [b]
Under $29	$31	206%
$ 30–$ 39	35	100
$ 40–$ 49	34	76
$ 50–$ 69	33	55
$ 70–$ 99	31	36
$100–$149	27	22
$150–$249	42	21
$250–$359	45	15
$360–$419	43	11
$420–$479	46	11
$480–$539	52	10
$540 and up	51	9

[a] Average benefits were weighted by participation in each household size for each income class.

[b] Based on median income in income class.

Source: See Appendix B.

however, monthly recipient benefits make up a significantly larger fraction of monthly income than do benefits for higher income classes, making participation in the program relatively more attractive to lower income households. Table 8 shows that, as of June 1972, average monthly household benefits ranged from a high of 206 percent for the lowest income class to 9 percent for the highest income class.

Third, there is also a discernible relationship between actual recipient benefits and family size. Data in Table 7 show that waste rises as household size rises. The recipient's monthly evaluation of waste in the lowest income class rises from $11.32 for a one-person household to $144.95 for a nine-person household. It may be noted that average monthly benefits (weighted by participation for income class and household size) were approximately $35.84 in June 1972, representing 82 percent of the potential recipient benefits from the average federal monthly bonus of $43.59 (see Appendix B). (The total average weighted monthly coupon allotment was $83.41.) When this estimate of average monthly benefit is combined with the earlier estimate of program costs from Chapter II, it may be seen that it took $1.09 in revenues for each $1.00 food coupon transferred, with each $1.00 food coupon valued at an average of $.82 by the recipient.

Looking only at the distribution of recipient benefits, we do not see a complete picture of participant responses to the food stamp program. First, existing food stamp regulations transfer both food coupons and general purchasing power (equivalent to cash) to recipients, inasmuch as the average purchase requirement is less than food expenditures in the absence of the program. Table 7 shows that the transfer equivalent to cash is relatively stable among households in each income class, but rises significantly as incomes rise. In all cases the food stamp program becomes equivalent to a pure cash transfer for the highest income classes. The average actual increase in food intake is 72.5 percent of the bonus (that is, the average monthly bonus is $43.59 and the average increased intake from the bonus is $31.62). Second, the increased food intake in fact overstates the ability of the food stamp program to augment food consumption. If recipients were given cash instead of food coupons, they would voluntarily increase their food purchases by $14.38 ($43.59 × 0.33), since budgetary studies indicate that food stamp recipients spend approximately one-third of their incomes on food. Thus the increased average monthly food intake directly attributable to the food stamp program is $17.24 ($31.62 − $14.38).

An indirect measure of recipient waste may be approximated by comparing the food consumption of families using food stamps

with that of families not participating in the program. Since the proportion of income spent on food is relatively stable among families of the same size and income, the proportions of income spent on food by participating and nonparticipating families with the "same" income can be directly compared. The amount spent on food as a proportion of all expenditures by a family participating in the food stamp program would be determined by calculating the ratio between the face value of the food stamp allotment and the participant's monthly income plus the cash value of the bonus food stamps. The resulting figure would then be compared with the food expenditure by a family with similar characteristics and equivalent income. If, for example, a family of four with a net adjusted monthly income of $300 would pay $83 for food stamps worth $150, its food consumption proportion would be .41 ($150/$300+$67) and would be compared with the actual food/expenditure ratio for a family having the same characteristics and monthly income of $367. If the food/expenditure ratio of the nonparticipating family is as great as that of the participating family, then the food stamp program is equivalent to a pure cash transfer equal to the amount of the bonus (that is, actual benefits in fact equal potential benefits).

This procedure can be applied to any bonus level. In the example given, the participating family's food consumption would fall to .33 ($150/$300+$150) if food stamps were zero-priced. A comparison was made for July 1970 of aged single persons and couples receiving Old Age Assistance (OAA) and of households of two and four recipients receiving Aid to Families with Dependent Children (AFDC).[7] Table 9 gives the results of that comparison for the fifty states and the District of Columbia. Variations among states reflect differing eligibility requirements and differing public assistance payments, since the nominal size of the food stamp bonus was uniform throughout the country for any given family size and income.[8] Thus in July 1970 the benefits from the food stamp program for a single person receiving OAA were equivalent to a cash transfer of the same size in forty-one states and the District of Columbia, representing 76 percent of total recipients. On the other hand, in all states and Washington, D. C., the proportion spent on food consumption by AFDC households with four recipients was significantly greater for food stamp participants than for nonparticipants with similar income and other family characteristics. Table 9 shows that these families would prefer cash or zero-priced food stamps to food stamps with a purchase requirement, with 79 percent of the families indifferent between cash or zero-priced food stamps. The classification of benefits described above and shown in Table 9,

Table 9

VARIATIONS IN PUBLIC ASSISTANCE AND FOOD STAMP BENEFITS, JULY 1970

Benefit Class[a]	Single Person on OAA	Couple Both on OAA	AFDC Family, 2 Recipients	AFDC Family, 4 Recipients
Class I: States where food stamp program with purchase requirement was equivalent to zero-priced food stamps or cash	All states not in class II and the District of Columbia	Alaska California Colorado Connecticut District of Columbia Hawaii Illinois Massachusetts Minnesota Nebraska Nevada New Hampshire New Jersey New York Ohio Pennsylvania South Dakota Vermont Washington	Illinois New Hampshire New Jersey New York Pennsylvania South Dakota Vermont Washington	No states
Class II: States where zero-priced food stamps or cash were preferred to food stamp program with purchase requirement	Arkansas Florida Georgia Indiana Louisiana Mississippi Missouri South Carolina West Virginia	All states not in class I	All states not in classes I and II and the District of Columbia	All states not in class III and the District of Columbia
Class III: States where cash was preferred to both zero-priced food stamps and food stamps with purchase requirement	No states	No states	Alabama Arkansas Florida Georgia Louisiana Mississippi Missouri Nevada South Carolina	Alabama Arizona Arkansas Florida Georgia Indiana Louisiana Maine Mississippi Missouri Nevada North Carolina South Carolina Tennessee West Virginia
Percentage of recipients in:				
Class I	76	23	31	0
Class II	24	77	55	79
Class III	0	0	14	21

[a] Comparison of an equivalent size grant in the form of (1) cash, (2) zero-priced food stamps, and (3) the food stamp program in July 1970.

Source: Malcolm Galatin, "A Comparison of the Benefits of the Food Stamp Program, Free Food Stamps and an Equivalent Cash Payment," *Public Policy*, vol. 21 (Spring 1973), pp. 296–99.

however, does not distinguish the relative size of benefits in each class. This independent 1970 study also indicates that the value of the benefits from the recipients' viewpoint is often less than the nominal value of the federal bonus.

Other indicators also provide indirect measurements of benefits to recipients. For example, the ratio of peak month to yearly average participation may measure entry into and exit from the food stamp program, thereby reflecting the overall level of satisfaction with the program.[9] If program benefits increase and dropouts decrease, the ratio of the peak month to the annual average should fall, eventually approaching one. Available evidence, shown in Table 5, suggests that net benefits to recipients have been increasing since the beginning of the food stamp program in 1964. Since 1964, benefits to recipients as measured by the average bonus per dollar purchased have more than doubled—from a low of 55 cents per dollar of the purchase requirement in fiscal year 1967 to a high of 137 cents in fiscal year 1974. Furthermore, recent changes allowing the recipient to purchase one-fourth, one-half, three-fourths or the full monthly allotment permit easier conversion of the in-kind transfer to a smaller but more valuable cash transfer by reducing waste.[10] (See Appendix A for a discussion of this variable purchase option.) In June 1972 approximately 6 percent of participants used the variable purchase option to acquire less than the full food stamp allotment.[11] Consequently, since actual benefits have been increasing over time, the ratio of peak month to average participation should be falling. In fiscal year 1965 this ratio was 1.49. It has since fallen to 1.05 in fiscal year 1972, the most recent year for which information is available. This ratio does not, however, take account of eligible recipients who are unaware of the program or who find the net benefits from participation to be zero or negative.

Table 10 reveals that overall participation by eligible recipients in 1972 was 26 percent. Participation was highest in the poorest third of eligible households.[12] Since the recipient's evaluation of actual benefits generally rises as incomes rise, the decline in participation as incomes rise is somewhat difficult to explain. But, as Table 8 illustrates, benefits as a proportion of family income fall significantly as incomes rise. Also, the value of time rises as incomes rise and participation in the food stamp program is time-intensive, so that there may be diminished incentives for higher-income families to participate. Of course, higher-income families, because of their higher incomes, may have greater wealth than other families, which would increase the probability that they would be ineligible for the program. And it may be noted that smaller households with higher

Table 10

DISTRIBUTION OF ELIGIBLE HOUSEHOLDS AND HOUSEHOLDS PARTICIPATING IN THE FOOD STAMP PROGRAM, BY INCOME CLASS, 1972

Annual Income	Number of Households		Percentage of Eligible Households Served by Program
	Eligible for program[a]	Participating in program	
Under $1,000	1,828,000	495,895	27.1
$1,000–$1,999	4,035,000	1,420,092	35.2
$2,000–$2,999	4,231,000	957,791	22.6
$3,000–$3,999	1,154,000	411,784	35.7
$4,000–$4,999	833,000	118,231	14.2
$5,000–$5,999	554,000	76,317	13.8
$6,000–$6,999	323,000	36,860	11.4
$7,000–$9,999	542,000	37,856	7.0
Total	13,500,000	3,554,826	26.3

[a] The number of eligible households is determined by income and by household size. This overstates the number actually eligible since no data are available on the wealth of these households.

Source: U.S. Department of Commerce, *Current Population Reports*, Series P-60, no. 84 (July 1972), and U.S. Department of Agriculture, Food and Nutrition Service.

incomes are not eligible for the food stamp program, but are not excluded in the total number of U.S. households for each income class.

A 1964 study of the food stamp program in St. Louis, Missouri, provides some information on reasons for nonparticipation in the food stamp program. In that survey a large percentage of respondents (28 percent) indicated they were not interested in the program but gave no specific reason for their disinterest.[13] Of those whose replies involved specific objection to the program, 36 percent found the coupon purchase requirement too high, 21 percent said family income was insufficient to purchase coupons and pay other fixed expenses, and approximately 6 percent blamed restrictions on purchases. In addition, excessive food levels accounted for 3 percent of the specific reasons for nonparticipation, and difficulties in obtaining monthly food stamp allotments accounted for 7 percent. Finally, a large number of the specific responses indicated that the household had never heard of the program (9 percent) or was misinformed about it (18 percent).

Estimates of recipient benefits are sensitive to the chosen initial assumptions, and modification of these assumptions alters the estimated level of benefits. For example, if participants are able to sell food coupons or purchase prohibited food or nonfood items with food stamps, their benefits will be greater than if they cannot. This is especially important because existing food stamp policy allows participants to purchase certain nonfood services, including the convenience of shopping at convenient food outlets and buying packaging and preparation services. Thus, with his food stamps, the recipient chooses higher-priced but more convenient retail food stores and prepared rather than unprepared foods. While these choices will not usually improve food nutrition (quite the contrary probably), they do reduce the recipient's evaluations of waste.

Different participation preferences also yield alternative estimates of benefits to recipients. For example, if the proportion of additional income spent on food is 0.23 (based on other budgetary studies of consumption expenditures) rather than 0.33 (see note 4 in this chapter), estimated weighted actual monthly benefits for the $43.59 average monthly federal bonus fall to $26.39. Using the 0.23 figure, one finds that nearly half (48 percent) of all calculated transfers in general purchasing power are negative. But when the 0.33 figure is used, none of the calculated general purchasing-power transfers are negative. A negative general purchasing-power transfer implies that, with food stamps, the participants reduce spending on all nonfood goods including housing and medical care. Thus, if the government has housing and medical care programs, the benefit structure of the food stamp program could hinder attempts to reach the objectives of such nonfood programs and could reduce overall general welfare.[14]

Of course these problems reduce the reliability of any particular estimate of actual benefits to recipients. Nevertheless, the number of independent estimates showing that actual participant benefits are less than potential benefits significantly increases the likelihood that there is overall waste from the food stamp program. Furthermore, calculated recipient benefits (shown in Table 6) are a better indicator of individual participation than recipient bonuses (see Appendix B). Finally, these estimates indicate that the waste element is relatively large, a conclusion consistent with the black market price of food stamps. Since the black market price of food stamps is approximately 50 cents to the dollar, food stamp participants who sell food stamps must view a relatively large proportion of the federal bonus as waste.[15] Participants selling food stamps at this price must subjectively value those stamps at less than 50

cents per coupon dollar: otherwise they would not exchange the coupons for cash.

Indirect Benefits

In addition to benefits to recipients, there may be benefits from the food stamp program for other members of society. Increased food consumption by lower-income individuals may be highly valued by some upper-income groups, and transfers from the higher-income to the lower-income groups could therefore increase overall welfare. Furthermore, transfers in kind may produce greater external benefits than those produced by an equivalent cash grant. This point was argued by Secretary of Agriculture Freeman in testimony before the House Agriculture Committee in 1967.

> But the advantage of the food tieup is that they use what they have been spending on food, secure the stamps which then means an additional amount—which means that the money is going for food. It is not going for something else. This is very important, very important.[16]

Finally if transfers of food from taxpayers to lower-income families represent a public good as viewed by contributors, then all individuals who place a positive value on this activity may share the benefits of the transfer without exclusion. When recipient private demand for the transferred good (food) and the collective demand for food transfers varies indirectly with price and directly with income, then the optimal quantity rises with increases in income for either recipients or givers, up to the point where the incremental value of additional units of the transferred good is zero.[17] Increases in collective demand for greater food consumption by the poor will increase the amount of food transferred to the poor. Moreover, the total food subsidy will also increase. Finally, until the marginal value placed by food givers on recipient food consumption falls to zero, increased recipient demand will increase the quantity of food transferred to recipients.[18]

The food stamp program, like other public organized activities, presents certain problems in organization and production. If an activity represents a public good but is privately financed, there will be an underproduction of the transfer activity because exclusion of noncontributors is prohibitively costly. But public sector organization and financing through tax revenues may be equally difficult. Under existing government institutions, the program may exist when the net benefits or even the gross benefits are negative. (This is a

consequence of the logrolling properties of the U.S. legislative branch and is discussed in Appendix C.)

Other theoretical problems also make difficult the determination of external benefits from the food stamp program. If there are external benefits from all goods consumed by an individual, it can be shown that there is no *a priori* case for public subsidy of any kind.[19] Since most of the goods and services consumed by the poor involve some form of public subsidy, this fact is particularly important in an evaluation of the external benefits of the food stamp program—particularly if the program involves negative general purchasing-power transfers that decrease the recipient's ability to purchase other important goods. Finally, one must determine the level of taxpayer objectives yielding external benefits. One of the major objectives of the food stamp program (assumed to be derived from voter preferences) is improvement in the nutritional value of the diets of needy families.[20] It is important to know the extent to which this outcome is achieved.

Data from studies of the pilot food stamp program in the early 1960s and of participating areas in the late 1960s and early 1970s yield a mixed picture of the improvement in the diets of needy families. Initial studies of two pilot projects—Detroit, Michigan, and Fayette County, Pennsylvania—during September and October 1961 (when nutrition advice was provided and the use of food stamps was carefully policed) showed increases in total participant food expenditures of 34 percent and 9 percent respectively.[21] In Detroit, the percentage of diets meeting recommended allowances for eight nutrients (protein, calcium, iron, vitamin A, thiamine, riboflavin, niacin, and ascorbic acid) rose 19 points from 29 percent to 48 percent (a difference which is statistically significant at the 5 percent level). The gain in Fayette County was somewhat lower (26 percent to 39 percent) and statistically insignificant at the same level. Furthermore, in Fayette County the average level of protein, calcium, iron, thiamine, and riboflavin consumed by participants actually declined as a consequence of reductions in milk, milk products, eggs, and grain products. Both areas, however, showed increases in food energy as a result of increased consumption of sweet and fatty foods. For example, in Fayette County the average quantity of purchased soft drinks rose by 40 percent between April–May 1961 and April–May 1962.[22] Since the pilot project studies are the only ones that show a statistically significant increase in the nutritional adequacy of participants' diets, it should be emphasized that these projects included " an educational program . . . [which helped] the participants in the wise use of their newly-gained pur-

chasing power in an effort to prevent the use of this buying power for frivolous food." [23]

Other studies on the relative experience of participants and nonparticipants for the food distribution and food stamp programs in 1969–1970 generally indicate little improvement in diet (see Appendix D).[24] Between September 1969 and June 1970, for example, families that remained in the food stamp program showed only a small improvement in diet adequacy, even when the average size of the federal bonus nearly doubled. Moreover, families participating in the food stamp program were using a large part of their increases in purchasing power for nonfood commodities and for purchased food lacking the nutrients most needed in the family's diet. In general, survey results indicated that the slightly increased food expenditures by families participating in the food stamp program were not significantly different from expenditures by nonparticipating families. It should also be noted that families who switched from the food distribution program to the food stamp program did not improve dietary adequacy. More recently (1971), studies for two California counties indicate that the food stamp program does not alter the purchasing preferences of most recipients (72 percent), but results instead in the purchase of larger quantities of the same food items.[25] In the 28 percent who changed product mix, most participants spent proportionally more on luxury or nonfood items such as candy and soft beverages.[26] A 1973 study showed that over one-third of the nation's counties are classified as "failure to feed counties" and 263 counties still have relatively serious hunger problems (see Table 11).[27] As shown in Appendix D, hunger and malnutrition remain national problems despite federal food assistance programs totaling more than $4.2 billion in fiscal year 1973.

In sum, evidence on the dietary consequences of the food stamp program supports the conclusion that the nutritional objectives of the program are generally not being satisfied and that the program in fact makes little positive contribution to diet improvement and apparently worsens the diet of some food stamp recipients. Furthermore, since the agricultural sector gains little from the program, the primary benefits of the food stamp program are general income supplementation and consumption of more convenient and palatable, but not more nutritious, foods.

There are additional possible negative benefits of the food stamp program. Past and current eligibility requirements have permitted participation by certain groups (college students, teachers, and strikers) that have low incomes during certain periods (such as summer school vacation periods for teachers) but high levels of

Table 11

HUNGER AND FAILURE-TO-FEED COUNTIES IN THE UNITED STATES, 1968 AND 1973

State	Hunger Counties,[a] 1968	Hunger Counties,[b] 1973	Failure-To-Feed Counties,[c] 1973	Total Counties[d]
Alabama	17	3	1	67
Alaska	0	0	0	1[e]
Arizona	1	0	7	10
Arkansas	6	28	12	75
California	0	0	6	56
Colorado	2	0	31	63
Connecticut	0	0	0	10[f]
Delaware	0	0	0	3
District of Columbia	0	0	0	1
Florida	9	9	19	64
Georgia	50	15	21	159
Hawaii	0	0	0	4
Idaho	0	1	22	39
Illinois	2	2	55	102
Indiana	0	0	54	92
Iowa	0	0	74	99
Kansas	0	2	99	105
Kentucky	13	14	20	120
Louisiana	11	4	2	64
Maine	0	0	1	16
Maryland	1	1	9	24[g]
Massachusetts	0	0	3	14
Michigan	0	0	1	83
Minnesota	0	2	47	85
Mississippi	38	3	3	81
Missouri	2	3	28	115[g]
Montana	1	1	25	41
Nebraska	0	13	73	93
Nevada	0	0	10	17[g]
New Hampshire	0	0	0	10
New Jersey	0	0	1	21
New Mexico	7	2	0	32
New York	0	0	9	62
North Carolina	28	30	41	100
North Dakota	1	4	23	43
Ohio	0	0	30	88
Oklahoma	5	1	17	77
Oregon	0	0	4	36
Pennsylvania	0	0	19	67

Table 11 *(continued)*

State	Hunger Counties,[a] 1968	Hunger Counties,[b] 1973	Failure-To-Feed Counties,[c] 1973	Total Counties[d]
Rhode Island	0	0	0	2[h]
South Carolina	18	1	5	46
South Dakota	7	9	25	47
Tennessee	11	16	24	95
Texas	35	67	94	254
Utah	0	0	20	29
Vermont	0	0	0	12[f]
Virginia	14	32	65	133[g]
Washington	0	0	4	39
West Virginia	0	0	0	55
Wisconsin	1	0	42	70
Wyoming	0	0	16	21
Total: all states	280	263	1,062	3,042[i]

[a] Counties with 40 percent or more below the income poverty line and no more than 25 percent participation in federal food assistance programs.

[b] Counties with 25 percent or more below the income poverty line and no more than 33 percent participation in federal food assistance programs.

[c] Counties with less than two-thirds of eligible poor participating in some federal food assistance program.

[d] Does not include counties with large Indian reservation populations.

[e] For food program purposes.

[f] Welfare districts.

[g] Includes one independent city.

[h] Public assistance districts.

[i] Includes thirty-seven independent cities.

[j] Includes forty independent cities.

Source: U.S. Congress, Senate, Committee on Nutrition and Human Needs, *Hunger —1973*, 93rd Congress, 1st session, May 1973, pp. 8, 10–12.

wealth (either current or discounted future incomes). As a result of complaints from taxpayers, both college students whose parents claim tax dependency or are not eligible for food stamp benefits and teachers are no longer permitted to participate.[28] Even so, in Madison, Wisconsin, for example, 65 percent of all recipients are college students,[29] and strikers are still eligible for full benefits if they meet monthly income and asset requirements. Certain groups, such as the National Labor-Management Foundation, have argued that food stamps and other welfare payments effectively result in governmental subsidies of strikes.[30] In fact, since the strikers can re-

ceive up to 84 percent of the national average hourly take-home pay in food stamps and other welfare benefits, the incentives for strikers to reach early settlements is not so great as it might otherwise be.[31] In the Westinghouse strike of 1970–1971, nearly all (98 percent) of the workers residing in Delaware County, Pennsylvania, received food stamps in January 1971.[32] During 1973, it has been estimated that strikers collected over $238 million in food stamp bonuses.[33] Some strikers find welfare and food stamp benefits sufficiently attractive that they do not return to work after strikes are terminated. Continuous pressures to prohibit striker participation in the program have been unsuccessful to date.[34]

Another objective of the original food stamp program was to increase the incomes of food producers, distributors and retailers. Available evidence indicates that the food stamp program has been only partially successful in attaining these outcomes. After adjustment is made for seasonal factors, it can be determined that sales in participating stores increased an average of 8 percent during the pilot projects.[35] Part of the increase is attributable to increased quantities of purchased food and part to higher prices of food items included.[36] In one survey, prices of fifteen food groups in retail stores participating in the pilot projects were found to have risen more than four times the national average rise during the same time.[37] Approximately 8 percent of the total sales volume involved food coupons. In another sample where food stamps represented 9 percent of sales volume, sales rose 7 percent when adjusted for seasonal factors and short-run price increases averaged 3.3 percent.[38]

If the food stamp program continues to be expanded at its present rate, increases in national food sales and food prices could become substantial. Before fiscal year 1973, food coupons always represented less than 3 percent of national food sales. Current estimates indicate they will exceed 7 percent of total sales by fiscal year 1975.[39] This increase should produce increases in economic activity for food producers and wholesale and retail establishments. A hypothetical (but characteristic) situation calculated for the study of the food stamp program in Del Norte and Humboldt counties (California) shows how a 5 percent increase in sales from food coupons can yield a 30 percent increase in profits.[40]

It should be recognized that the increased benefits to food producers occur at the expense of other producers and of consumers. First, a rise in food prices reduces net benefits to food stamp recipients and imposes pecuniary losses on all members of society, including the nonparticipating poor, in proportion to their food consumption. These losses will, of course, be offset by lower

prices of nonfood items, but the net effect of the two forces is impossible to determine. Second, incomes of nonfood producers, wholesalers, and retailers will fall relative to incomes in the food industry.

Finally, there may be secondary benefits to taxpayers from increased output if malnutrition is reduced. Improved nutrition may significantly reduce the amount of resources needed to cure health problems. Since malnutrition can be linked to infant and child mortality, retardation, and other health problems, the costs of solving these problems can be reduced by improvements in nutrition. Moreover, improved learning capacity and productivity from reductions in malnutrition have been positively linked to national development and growth.[41] Several studies have shown that vitamin and caloric supplementation of previously inadequate diets will increase output, improve merit score, and reduce absenteeism and turnover.[42] However, since only a minority of low-income persons had inadequate diets before the food stamp program began and since inadequacies were also found in the diets of various middle- and upper-income groups (ranging from 31 to 22 percent through the various levels), income supplementation does not appear to be the best path for the elimination of malnutrition.[43]

CHAPTER IV

ALTERNATIVES FOR IMPROVING NUTRITION

Experience with the food stamp program indicates that increased food assistance for the needy—one of the program's major objectives—has been partly achieved. In the previous chapter, however, a detailed analysis of this program revealed several important problems lying in the way. Those who are concerned with these problems generally confine their solutions to expanding the participation of the poor and to establishing tighter controls over the program's operations. While increased resources devoted to these purposes may reduce hunger and malnutrition for the poor, few have asked if more efficient programs could be instituted that would permit greater improvement in nutrition and provide savings in federal outlays and in the use of social resources.

The attempt to reach the various objectives of the Food Stamp Act of 1964 through a single program or policy instrument suggests that one or more of the objectives will not be fully satisfied for any given resource commitment.[1] It would be unlikely that we would find the food stamp program simultaneously providing the best agricultural incomes policy and the best method for reducing malnutrition among the poor. Evidence strongly indicates that, for the most part, the objective of improving nutrition has not been met. If the nutrition objective is an important one, an alternative program should be chosen. Furthermore, because food stamp recipients have generally used the increased food purchasing power to buy food service conveniences and because, in any case, most of the retail food dollar goes to nonagricultural industries, federal expenditures for providing bonus stamps do little for agricultural income. Moreover, new conditions have significantly increased the demand for agricultural products, eliminating idle capacity in the industry. Con-

sequently, in recent years the food stamp program has simply increased the general cost of food rather than adding to output.

When the Food Stamp Act was enacted in 1964, net farm income (including net inventory changes) was $3,815 per farm (1967 dollars).[2] By 1973 income per farm (1967 dollars) had risen to $6,862. Even more striking has been the gain in farm per capita disposable income relative to the gain in nonform per capita disposable income. In 1964 per capita personal disposable incomes for the farm population were 62 percent of the incomes for the nonfarm population.[3] In 1973 per capita farm disposable incomes averaged $3,913 or approximately 93 percent of the disposable income received by the nonfarm population.[4]

Methods for Improving Diets

Attempts to improve nutrition may take the form of consumer education, increased consumer incomes, improved nutrition information, or lower nutrition costs. The degree of improvement in nutrition brought about by higher incomes would probably closely approximate that achieved by the food stamp program. When the food stamp program resulted in a higher ratio of food expenditures to nonfood expenditures than would have occurred with identical but unconstrained incomes, the food stamp recipients were found to select more convenient or palatable foods than they would otherwise have selected. These foods, however, do not necessarily improve overall nutrition and may actually reduce it. A similar degree of nutritional improvement could be accomplished by a pure cash transfer. If such a transfer would produce results much the same as those produced by the food program, there would be no economic reason for offering a separate food program. Yet, if the amount taxpayers are willing to transfer depends on expected recipient consumption and if taxpayers can be fooled by the earmarking of cash transfers for food, then there may be political reasons for a separate in kind transfer mechanism.

A second and more promising avenue for reducing malnutrition is to provide education on the value of improving nutrition as well as on the dietary value of alternative food sources (including specific combinations of foods) and on methods of preparing foods. The reported success of the 1961 pilot food stamp programs may largely have been a consequence of the educational material provided to program participants.

A system requiring that standardized information be printed on food and food product labels is another way of providing informa-

tion to consumers. In this way, the amount of nutrients or percentage of minimum daily requirements per unit (ounce, pound, pint) would be readily available to buyers of food for home consumption.

While income supplementation and improved nutritional information can be expected to improve diets among the poor, the most effective way at this objective is to lower the cost of nutrition. When palatability of food is ignored, the answer to the question of how to obtain the lowest-cost nutritionally adequate diet comes down to determining nutrition requirements for individuals, estimating the nutritional elements of each food, and identifying available foods.[5] The lowest-cost nutritionally adequate diet is determined by minimizing total food expenditure, subject to the condition that the quantity of each nutrient shall be equal to or exceed the daily required amount. While the obtained solution is unique, it is sensitive to the chosen conditions. First, nutrition requirements vary with age, sex, weight, climate, and physical activity. For many nutrients, minimum requirements are uncertain. Second, the nutritional levels of many foods are uncertain, as are the interrelationships among foods. Third, the nutritional contents of individual foods often vary substantially. For example, the ascorbic acid content of 100 grams of apples varies from 21 milligrams in the Ontario variety to 2 milligrams in the McIntosh variety.[6] Nutritional contents also vary with soil and weather conditions and with food preparation. Finally, the solution is sensitive to changes in the relative prices of foods, since most of the minimum-cost nutritious diets usually involve fewer than ten different foods and the price of any one food would represent a large percentage of the total cost. Solutions to all the problems except for the last can be attained by setting higher nutrition levels.[7] The problem of changes in relative prices can be overcome by new calculations or by limiting food selection to those foods with demonstrated price stability over time.

Increases in real income in the United States have effectively eliminated the need for recalculating the minimum cost diet. If relative prices have not changed much, some indication of a "minimum" cost diet can be obtained by multiplying the original quantities of food in such a diet by today's prices. For example, the 1944 Stigler 3,000 calorie diet (consisting of wheat and pancake flour, cabbage, spinach, and pork liver) could be obtained for $13.09 a month ($32.91 less than the monthly allotment of $46.00) during July 1974 in Charlottesville, Virginia.[8] Introducing a palatability constraint—for example, a constraint that foods included must be purchased sometime during the year by at least 90 percent of all

families—raises the cost. Thus, with the 1955 Smith palatable diet, a family of three could obtain an adequately nutritious and palatable diet consisting of fresh milk, picnic ham, fresh carrots, fresh potatoes, white flour and oleomargarine for $67.21 a month in Charlottesville, Virginia, during July 1974 (see Table 12).[9] This diet also introduces minimum levels for fat, carbohydrates and phosphorus in addition to the other nutritional requirements. Because this diet was calculated in 1955, there may be an alternative diet at lower cost (this would be the case if relative prices have changed). In any event, the cost of this diet is significantly below the monthly allotment of $118 for July 1974.

Determination of the most economical nutritionally adequate diet may be necessary, but this is not sufficient for reducing malnutrition of the poor. The choice among particular forms of voluntary

Table 12

MINIMUM-COST PALATABLE DIET FOR A FAMILY OF THREE FOR FOUR WEEKS, MAY 1955 AND JULY 1974

Commodity	Quantity (lb. per 4-week period)	Price ($ per lb.)		Expenditure ($ per 4-week period)	
		May 1955	July 1974	May 1955	July 1974
Milk					
Fresh, homogenized, plain	139.116	$.082	$.199	$ 11.41	$ 27.68
Fats					
Oleomargarine	4.373	.240	.390	1.05	1.71
Green and yellow vegetables					
Fresh carrots	6.035	.160	.245	.97	1.48
All other vegetables					
Fresh potatoes	83.415	.060	.100	5.00	8.34
Pork					
Picnic ham, cured butts	10.473	.341	.990	3.57	10.37
Flour					
White, enriched	65.906	.096	.189	6.33	12.46
Total expenditure in four-week period ($)				$ 28.33	$ 62.04
Total annual expenditure ($)				$368.29	$806.52

Sources: May 1955 prices from Victor E. Smith, *Electronic Computation of Human Diets* (East Lansing: Michigan State University Business Studies, 1963), p. 21; July 1974 prices from author survey of three food markets (Big Star, Safeway, and Reid Super Save) in Charlottesville, Virginia, July 1974.

nutrition programs is somewhat difficult since little is known about producer and consumer responses. One method of increasing nutrition levels is to fortify the foods most commonly eaten by needy families. However, because excess levels of some nutrients like iron may be harmful, care must be taken in determining fortification levels. Another method of increasing nutrition levels is the introduction of new low-cost nutritious foods for home consumption or the introduction of prepared meals. This latter method has been chosen for school children, and studies indicate that the school breakfast and lunch programs have been relatively successful in improving nutrition.[10] Finally, naturally nutritious foods could be subsidized so that their market price would be lowered and consumption would be encouraged.

Each way of attacking the problem of nutrition has its own set of problems. Nutrient fortification of commonly chosen foods, for example, probably has the lowest cost of all the methods, but it does not ensure that home-served meals will contain adequate nutrition. Moreover, new fortified food would involve information expenses in informing potential customers of the fortification. Expanding the prepared-meals programs to take in additional participants would also be difficult and would entail significantly higher average costs than the current program, inasmuch as the marginal costs of providing prepared meals at schools in the current program are below the marginal costs for expanding the program to nonschool needy individuals. Finally, while subsidies to reduce prices of nutritious foods would increase consumption of those foods, there is no assurance that the groups with the highest rates of malnutrition would choose these foods to consume.

In addition to the general difficulties of solving the problem of nutrition, programs must cope with the wide differences in the conditions of the poor throughout the United States. There are, for example, differences in average age and in the distribution of age, sex, and family status among localities. Moreover, differences in climatic conditions alter nutritional requirements, and local variations in social conditions and in food preferences may also be important. Local variations in food prices will alter the most efficient solution to particular geographic nutrition problems. Finally, certain areas may have extensive locally financed government or nonprofit programs that would be replaced by a federal program. When such conditions exist, it is more likely that malnutrition will be reduced if federal programs directly seek particular nutritional improvements rather than going indirectly through the food stamp program.

Local Nutrition Incentives Program

A possible federal transfer program for satisfying many of these conditions may be called the Local Nutrition Incentives Program (LNIP).[11] Under LNIP, federal funds for the first year of the program would be transferred to localities according to the ratio of malnutrition in the community to malnutrition in the nation.[12] Funds could be distributed to any certified organization whose activities reduced malnutrition. In the second year, some part of available revenues (say 80 percent) would be transferred to localities according to this formula and the remaining part (say 20 percent) would be distributed to localities according to their relative improvements in nutrition.[13] Nutritional improvements could be defined as the number of individuals who moved from inadequate diets to at least minimum nutritionally acceptable diets.[14] Adjustments for changes in the needy population would, of course, be necessary. Such measurements would also require an increase in the statistical activities of the federal government. Since reduction of malnutrition is probably an increasing-cost activity (that is, costs increase more than proportionally), some adjustment should be made for the percentage decrease in local malnutrition. The percentage of the funds devoted to improvement payments would be gradually increased over time.

CONCLUSIONS

For over a decade the U.S. food stamp program has attempted to solve two problems—low agricultural incomes and malnutrition among the poor—with the same instrument. Despite the apparent success of the initial pilot programs, neither goal has been achieved, even under the current multi-billion-dollar funding levels. Meanwhile, agricultural incomes have increased greatly relative to urban incomes, but for reasons having nothing to do with food stamps, and there is no longer a need to supplement agricultural incomes.

The failure of the food stamp program comes generally from the inability of a single policy instrument to solve two or more potentially competing objectives and specifically from the structure of benefits in the program. The benefit structure has produced recipient valuations of the food coupons significantly below the market values of the in-kind transfers. Some estimates (discussed in Chapter III) indicate that the average household receiving food stamps values them at approximately 82 percent of their market value. When recipient valuation of the in-kind transfer is below the market price, the program generates waste (18 percent of the transfer in this case). Participants will then attempt to reduce waste by purchasing convenience in specially prepared foods, by purchasing foods in the high-price, service-oriented stores, by choosing more palatable foods which are not necessarily as nutritious as those they would otherwise choose, or by illegally trading food stamps for other goods or cash. Even increased levels of food consumption have apparently failed to make significant nutritional improvements in participants' diets.

Minimum estimates of the administrative costs of local, state and federal administration of the food stamp program place those

costs at approximately 9 percent of the total federal bonus of additional food purchasing power (discussed in Chapter II). Certain costs, such as local and state overhead or fixed costs and enforcement costs, are omitted from this estimate. Finally, participant costs of obtaining and using food stamps, as well as the costs to nonparticipants who must wait in the retail store check-out lines while the food is sorted, are also ignored.

The major findings of this study should be disconcerting both to taxpayers and to food stamp recipients. Estimated average monthly administrative costs were $4.21 per household in 1972 (discussed in Chapter II). When combined with average recipient waste, the total monthly costs of the distortion of food consumption becomes $11.96 per household. Because food stamp regulations effectively transfer general purchasing power (equivalent to cash) and because recipients would purchase some additional food if given cash instead of food stamps, increased food intake amounts to only $17.24 a month (discussed in Chapter III).

There also appears to be considerable doubt on the value of external benefits to taxpayers who are concerned with increasing agricultural income and improving the nutritional adequacy of diets for the poor. The food stamp program has generally failed to meet its objective of agricultural income supplementation. While the program has increased food sales and food prices (discussed in Chapter III), little of this increase has flowed through to low-income farmers. The recent rise in agricultural incomes to levels approaching those in the nonagricultural sectors of the economy stems from other forces, such as higher food demand and prices in the world market, rather than the federal food stamp program.

The problem of agricultural income supplementation may have been solved by changing domestic and foreign food demand, but the problem of malnutrition remains. In some cases, nutrition may be hindered rather than helped by the food stamp program. Recipients are able to substitute more palatable or more conveniently packaged foods, such as steak or prepared dinners, for cheaper (but not necessarily less nutritious) foods. The presence of malnutrition among families well above the poverty line clearly indicates that income supplementation in the form of food stamps will not automatically eliminate malnutrition.

If problems of malnutrition are to be reduced, an alternative solution appears to be necessary. Food labeling and educational programs may be helpful. But these answers may fail to provide the flexibility necessary for solving nutrition problems, since solutions for malnutrition vary substantially from region to region. The

effectiveness of federal nutrition efforts would be maximized by a program that transferred funds to local communities and rewarded nutritional improvements (discussed in Chapter IV). In addition, there is some evidence that (1) participation by certain groups of the population, such as strikers, and (2) the selling of food coupons produce negative benefits to taxpayers. Finally, the existing governmental structure for determining federal programs may permit the establishment of a program that has negative net benefits (discussed in Appendix C).

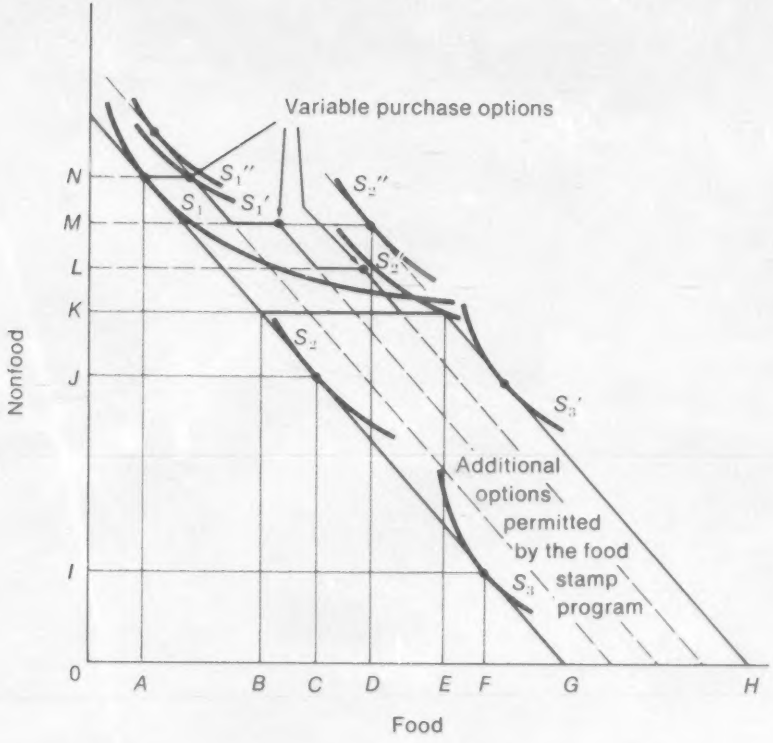
Overall, the food stamp program has failed to serve its twin objectives of improving nutrition among the poor and supplementing agricultural incomes, despite the tremendous growth in funding over the past decade. Nor does the program supplement incomes efficiently, since the government spends in excess of $1.09 to provide $1.00 in supplementary in-kind (food) income which the recipients value at 82 cents. If the stated objectives of the program are important, then the food stamp program must be replaced with programs that are more effective. Even if it is not replaced, it might be abolished on the grounds that it fails to satisfy the objectives of the enabling legislation as amended.

APPENDIX

APPENDIX A: ECONOMICS OF FOOD STAMP BENEFITS AND PARTICIPATION

This appendix gives a geometric interpretation of food stamp participation and nonparticipation and identifies the benefits to the recipients. Figure A-1 represents alternative family preference functions for food and nonfood commodities. These preferences are shown

Figure A–1
FOOD PREFERENCES AND PROGRAM PARTICIPATION



by the curves S_1, S_2, S_3, et cetera, which depict various combinations of food and nonfood commodities that yield the same amount of satisfaction or utility to the family. The shape of the utility curve reflects a family's willingness to give up some food (nonfood) commodities to obtain more of nonfood (food) commodities. The precise amount each family is willing to give up depends on the personal valuation of food and nonfood commodities and varies in an inverse proportion to the amount of the commodity available for consumption. For any family the lower the amount of food consumed the higher is the personal valuation of food. Not all families have identical tastes. Some eligible families place a relatively low personal valuation on food and are willing to give up large amounts of food to obtain small increments of nonfood commodities. Families with these tastes would have equal satisfaction (utility) combinations of food and nonfood commodities such as are represented by S_1 in Figure A-1. Other families with a relatively high preference for food commodities would have equal satisfaction combinations of food and nonfood commodities such as are represented by S_3. The majority of eligible families is likely to fall somewhere between these two extremes and would have equal utility combinations of food and nonfood commodities such as are represented by S_2. In the absence of a food stamp program, the family chooses the combination of food and nonfood commodities that makes its relative preference for these two goods equal to exchange opportunities given to it by the relative prices in the market. In Figure A-1 participants with preferences represented by S_1 would choose OA units of food and OM units of nonfood commodities when the relative price of food is ON/OG. Families with preferences represented by S_2 would choose OC units of food and OJ units of nonfood commodities, and those whose tastes are represented by S_3 would choose OF (food) and OI (nonfood) respectively.

A food stamp program with a purchase requirement (and no variable purchase options) can be shown to consist of the purchase requirement KN (or $ON-OK$) if valued at nonfood prices and OB if valued at food prices. In exchange the recipient receives food stamps capable of purchasing OE units of food commodities. In this figure the food stamp bonus or transfer is BE (or $OE-OB$). In the absence of variable purchase options, eligible recipients with preferences for food and nonfood commodities represented by S_1 would not participate in the food stamp program.

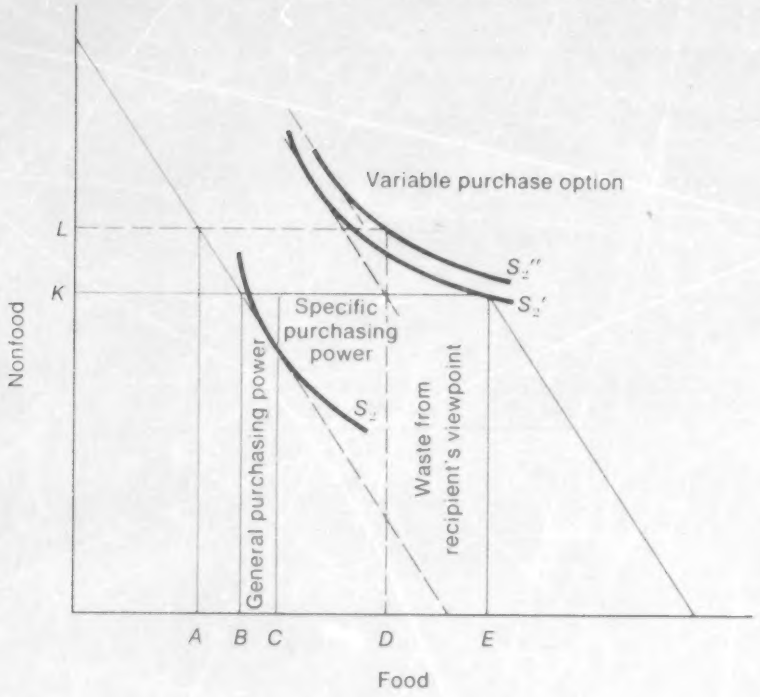
This can be seen by a comparison of the level of satisfaction (S_1) attained in the absence of the food stamp program with the level of satisfaction attained by participation in the program. In

Figure A-1, S_1 is above the level of satisfaction that contains OE units of food and OK units of nonfood commodities. Eligible recipients who value food commodities very highly may find the federal food coupon bonus equivalent to a cash transfer and purchase additional units of food. For example, in Figure A-1 eligible recipients with tastes represented by S_3 would participate in the food stamp program, moving to a higher level of satisfaction S_3' and purchasing more food than they did before they were in the program. Finally, most eligible recipients with preferences lying between these two extremes will participate in the program because it permits consumption of a higher-valued combination of food and nonfood commodities, but would prefer receiving a cash transfer representing the same federal expenditure to receiving the food coupons. In the absence of the program these recipients would consume OC units of food and OJ units of nonfood commodities. The federal food stamp bonus permits the consumption of OE food and OK nonfood commodities, valued at S_2', a level of satisfaction higher than S_2. A cash transfer equal to the bonus, however, would allow the participant to substitute KL (or $OL-OK$) units of nonfood commodities for DE (or $OE-OD$) units of food and attain a higher level of utility or satisfaction at S_2'.

One can also analyze the consequences of a variable purchase option where participants may elect to select some fraction of the monthly food stamp allotment. The current food stamp program allows recipients to purchase one-fourth, one-half, or three-fourths of the monthly coupon allotment. These variable purchase options are shown in Figure A-1. (Each variable purchase option also permits the recipient to buy more than the chosen fractional allotment.) With variable purchase, some individuals who otherwise would not participate may find participation advantageous and join the program. In Figure A-1, families who have preferences represented by S_1 and who did not participate when the full allotment was required, would choose the variable purchase option with one-fourth of the total allotment and increase their satisfaction to S_1'. These recipients would still prefer, however, an equivalent cash transfer permitting the higher utility level S_1''. Those families with tastes represented by S_2 may not find the current variable purchase option useful in reaching higher satisfaction (see Figure A-1).

The federal food coupon bonus, BE, for individuals with preferences represented by S_2 in Figure A-2 is divisible into (1) a transfer in general purchasing power, (2) a transfer in specific (food) purchasing power, and (3) waste. These amounts are BC (or $OC-OB$),

Figure A–2
DISTRIBUTION OF RECIPIENT BENEFITS



CD (or $OD-OC$), and DE (or $OE-OD$) respectively, multiplied by the price of food. One finds the transfer in general purchasing power by taking the difference between the purchase requirement and the amount spent on food in the absence of the food program. To obtain the transfer in specific purchasing power one must determine a cash subsidy equivalent to the subjective valuation of the bonus food stamps. This means one must find the amount of cash necessary for the recipient to be left at the same level of satisfaction given by the food stamp bonus, S_2'. In Figure A-2, this amount is BD (or $OD-OB$). The difference between the subjective valuation of the food stamp bonus and the general purchasing-power transfer is the specific or food purchasing-power transfer. The specific purchasing-power transfer is CD (or $OD-OC$), and the remaining portion of the bonus DE (or $OE-OD$) is waste. Through variable purchase options, such as those currently offered under the food stamp program, waste and federal program costs can be reduced (since the bonus falls to AD, which is three-fourths of BE), while benefits rise. This can be

checked by calculation of the transfer in general purchasing power, the transfer of specific purchasing power, and the waste occurring when the recipient increases satisfaction by moving to S_2' with OD units of food and OL units of nonfood commodities under the variable purchase option.

APPENDIX B: ESTIMATING PARTICIPANT BENEFITS

Estimated values of the distribution of the food stamp bonus into general purchasing power, specific purchasing power, and waste were determined by a solution of the following equations:

Bonus = (monthly food allotment) − (monthly purchase requirement)

General purchasing power = (monthly food expenditure in absence of food stamp program participation) − (monthly purchase requirement)

Specific purchasing power = (recipient's benefits or valuation of the bonus food stamps) − (general purchasing power)

Waste = (bonus) − [(general purchasing power) + (specific purchasing power)]

Monthly food allotments and purchase requirements were obtained from the Food and Nutrition Service, United States Department of Agriculture. The amount of monthly food expenditures in the absence of food stamp program participation was determined by multiplication of participant income (calculated at the midpoint of the income class) by the fraction (p) spent on food (determined from budgetary studies). The valuation of the food coupons by participants is significantly more difficult to estimate, but if the proportion spent on food in the absence of a food stamp program is constant among eligible households, if market prices are relatively constant, and if the household's utility function is representative of the individuals comprising it, then benefits can be estimated by a Cobb-Douglas utility function of the following form:

$$\text{Recipient's benefits} = \left(\frac{\text{monthly food allotment}}{p}\right)^{p} \left(\frac{\text{monthly disposable income} - \text{monthly purchase requirement}}{1-p}\right)^{1-p} - \text{monthly disposable income}$$

Benefits were calculated for one-person through nine-person households in each income class with the use of Food and Nutrition Ser-

vice data for June 1972 and a value of 0.33 for p. The results are reported in Table 6. In Table 7, the benefits for each income class were determined by a weighting of the benefits to each household size through participation. Overall benefits are a weighted average (based on participation) of benefits for all incomes and household sizes. Average monthly allotment was determined by a multiplication of the allotment for each household size by participation, a summing over all income classes, and division of the sum by the total number of participants.

An indication of the overall reliability of estimates of benefits to recipients of the food stamp program is provided by an indirect test whether the bonus or the recipient benefits make a better predictor of participation by eligible households. The probability of participation by any eligible household is postulated to be

$H_p = \Theta_1 B_1 + \Theta_2 B_2$ where H_p = probability of participation by eligible recipient;

$H_0 : \Theta_1 > 0$ and $\Theta_2 = 0$ B_1 = recipient bonus;

$H_1 : \Theta_1 = 0$ and $\Theta_2 > 0$ B_2 = calculated recipient benefits.

Number of participants in the food stamp program and the numbers of households eligible were obtained from the Food and Nutrition Service, U.S. Department of Agriculture, and the U.S. Department of Commerce, respectively. Bonuses and benefits for each household are given in Table 6, Chapter III. Calculated results using ordinary least squares regression (with t statistics below the estimated coefficient) are:

$$H_p = \underset{}{-.00084B_1} + \underset{}{.01158B_2}$$
$$\underset{}{(-0.51)} \quad \underset{}{(+4.61)}$$
$$R^2 = .47$$
$$F_{(1,31)} = 27.04$$

It appears that one must accept the alternative hypothesis that the bonus does not, and calculated benefits to recipients do, explain participation in the program.

APPENDIX C: PUBLIC PROGRAMS AND GOVERNMENTAL FINANCING

This appendix discusses certain consequences of the logrolling process in government. Consider the hypothetical demands for four public programs by five different groups as illustrated in Table C-1. Total program benefits, costs, and net benefits are given for each program. The total benefits from Program 1 are $40.5 billion and the total costs $28.0 billion, yielding a net benefit of $12.5 billion. If price discrimination (the charging of different prices for the same

Table C-1

BENEFITS, COSTS, AND NET BENEFITS FOR PROGRAMS WITH THE PUBLIC GOOD CHARACTERISTIC

($ in billions)

	Program 1	Program 2	Program 3	Program 4	Total
Benefits					
Group A	7.5	3.0	8.0	−1.5	17.0
Group B	8.0	12.0	2.0	3.0	25.0
Group C	7.5	3.0	11.5	−2.5	19.5
Group D	12.0	−1.5	6.0	0.0	16.5
Group E	5.5	7.5	5.0	−1.0	17.0
Total	40.5	24.0	32.5	−2.0	95.0
Total costs	28.0	15.0	33.0	3.0	79.0
Net benefits	12.5	9.0	−0.5	−5.0	16.0
Individual programs					
Majority	9.5 (37.5–28.0)	−0.0 (15.0–15.0)	−3.0 (30.0–33.0)	−3.0 (0–3.0)	
Unanimity	−0.5 (27.5–28.0)	−15.0 (0–15.0)	−23.0 (10.0–33.0)	−3.0 (0–3.0)	
All programs	$(16.4 \times 5) - (28.0 + 15.0 + 33.0 + 3.0) = 3.0$				

Note: Program benefits represent the point where marginal program benefits equal marginal program costs.

program) were permitted and exclusion of noncontributors were possible, this program could be provided without governmental action because net benefits are $12.5 billion. Program 2 (with $9.0 billion in net benefits) would also be produced without governmental action if the same assumptions held. Because the net benefits of Programs 3 and 4 are negative, they would not be produced by nongovernmental organizations. Different assumptions would produce different outcomes. For example, if exclusion is possible but price discrimination is not, Program 1 would be provided, but Programs 2, 3, and 4 would not be provided. A contribution of $7.5 billion each from groups A, B, C and D would provide revenues of $30.0 billion, yielding a producer's surplus of $2.0 billion if the producer chose the optimal output.

Similarly, provision of a service by government units will generally alter outcomes. Suppose governmental institutions are designed in such a way that all groups must participate if a program is to be provided, but public programs do not permit tax discrimination (that is, individuals with the same taxable income must pay the same tax). If the provision for each program were made separately but unanimity were required for passage, none of the programs would be provided inasmuch as the available total revenues for Programs 1 through 4 are −$0.5, −$15.0, −$23.0 and −$3.0 billion respectively. If, however, a majority vote were required for passage, then Program 1 would be produced because each of the five groups would be taxed $7.5 billion and total program costs are only $28.0 billion. If all four programs were simultaneously offered to the groups for $16.4 billion each and the groups were required to accept four programs or none, then both a majority vote and a provision for unanimity would produce the same outcome: all four programs would be provided. Because each group values the total of all four programs in excess of $16.4 billion, the groups would all vote to provide the entire package even though the net benefits of Programs 3 and 4 (and the gross benefits for Program 4) were negative.

Since this set of assumptions (individuals do not vote on each program, outcomes are decided by majority rule, and price discrimination is prohibited) closely approximates the facts of the current situation, one cannot be certain that any particular program is unlike Program 3 or Program 4 in the example.

APPENDIX D: STUDIES OF FOOD NUTRITION

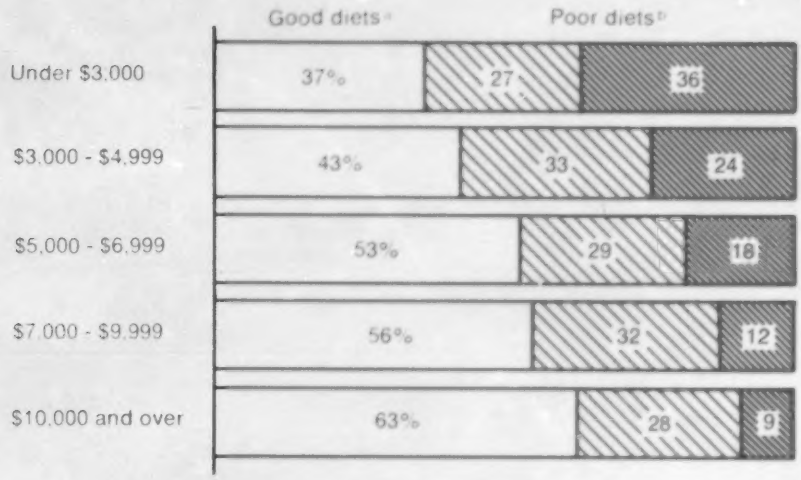
Despite a number of studies of hunger and malnutrition in the United States, precise information on the nature and magnitude of the problem is lacking. The *Ten-State Nutrition Survey* (the largest U.S. nutrition survey) warns that the population studied was not representative and survey findings cannot be extrapolated to the general population. Moreover, it is extremely difficult (even assuming for the moment that the technical problems of measurement, nutritional interrelationships and human reactions can be solved) to clarify the relationships between nutritious diets and other variables. There are differences in household diets as the result of nutritional information, homemaker education, geographic location, climate, population density, ethnic background, age distribution, activity levels, income and other variables.[1]

Education usually, but not always, increases dietary adequacy.[2] Higher incomes seem to be accompanied by more nutritious diets. For example, Figure D-1 shows that in 1965 the proportion of households that met recommended allowances for seven nutrients rose from 37 percent for incomes under $3,000 to 63 percent for incomes $10,000 or over. Nevertheless, when average income rises, it is possible that overall dietary quality will fall. Only 50 percent of all households consumed the recommended allowances for seven nutrients in 1965, a full 10 percent lower than in 1955, despite a 25 percent rise in per capita real disposable income between 1955 and 1965.[3] Also the number of poor diets (diets with less than two-thirds allowance for one to seven nutrients) rose from 15 percent in 1955 to 21 percent in 1965. The decline in overall dietary adequacy from 1955 to 1965 can be attributed to decreased use of milk and milk products, flour and cereals, and vegetables and fruit and increased use of bakery products.[4] More recent information indicates that the trend evident from 1955 to 1965 has not reversed. For example, both young children (one to three years) and teenagers (twelve through fourteen) had average lower nutrition intakes of calories, protein, calcium, vitamin A, and riboflavin in 1968–1970 than in 1965.[5] Finally, even under the most controllable situations, malnutrition

Figure D-1

INCOME AND QUALITY OF DIETS

(Nationwide Household Food Consumption Survey, Spring 1965)



[a] Met recommended dietary allowance for seven nutrients.

[b] Had less than two-thirds allowance for one to seven nutrients.

Source: U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, *Poverty, Malnutrition, and Federal Food Assistance Programs: A Statistical Summary*, September 1969, p. 5.

can be a serious problem. Evidence suggests that malnutrition among hospitalized patients under physician care is "one of the most serious nutritional problems of our time."[6] Although the nation is spending more for food, nutrition does not appear to be improving significantly.

Recent nutritional outcome of the food stamp program appears to be equally poor (see Table D-1). When the outcome is adjusted for other variables, the only factor that systematically appears to improve diets is a program of nutrition education (income is sometimes a significant variable but is highly correlated with education). In fact, evidence suggests that food stamp recipients spend a good portion of their increased "food purchasing power" for more palatable or more conveniently packaged foods.[7] In one study, food stamp participants were found to choose relatively more processed meat (24 percent of total meat purchases) and prepared dinner aids (5 percent of total food expenditures) than nonparticipants (who

Table D-1

RECENT STUDIES OF NUTRITION FOR FOOD STAMP PARTICIPANTS AND NONPARTICIPANTS, 1972–1973

Location of Study	Major Findings
Central Pennsylvania	Families in the food stamp program between 1969 and 1970 had only a small improvement in dietary adequacy, which was not significant in one of the two rural areas studied.
North Carolina	Multiple regression results show that the food stamp program does not significantly improve nutrient intake, but that income and homemaker's education level both contribute to improved diets.
Northern California	Increased food purchasing power increased food expenditure, but did not alter overall product mix among participants and nonparticipants.
United States	Average servings of milk, meat, fruit and vegetables, and bread and cereal were approximately equal for food stamp participants and nonparticipants in the Food and Nutrition Education program, despite higher incomes for food stamp participants.

Sources: J. Patrick Madden and Marion D. Yoder, *Program Evaluation: Food Stamps and Commodity Distribution in Rural Areas of Central Pennsylvania* (University Park, Penn.: Pennsylvania State University, June 1972); Dale M. Hoover and James K. Whittaker, *Regression Analysis of the North Carolina Nutrition Survey Data: Some Problems and Tentative Findings* (Raleigh, N.C.: Institute of Statistics, North Carolina State University, December 1972); S. H. Logan and D. B. DeLoach, *The Food Stamp Program: Del Norte and Humboldt Counties, California* (Davis, Calif.: California Agricultural Experiment Station, 1973); and J. Gerald Feaster and Garey B. Perkins, *Families in the Expanded Food and Nutrition Education Program: Comparison of Food Stamp and Food Distribution Program Participants and Nonparticipants*, Agricultural Economic Report No. 246, September 1973.

spent 18 percent of their meat budget on processed meat and 3 percent of their total food purchases on prepared dinner aids).[5] In sum, nutrition in the United States does not appear to have been improving in recent years, and increased use of food stamps will not necessarily lead to improvement.

NOTES

NOTES TO FOREWORD

[1] S. H. Logan and D. B. DeLoach, *The Food Stamp Program: Del Norte and Humboldt Counties, California* (Davis, Calif.: California Agricultural Experiment Station, 1973), pp. 9–10.

[2] *Dietary Levels of Households in the United States* (Washington, D. C.: U.S. Department of Agriculture, 1957), pp. 40–41.

[3] In 1970, liberalization of the program introduced the option of purchasing less than the full issue of stamps. About 6 percent of participants have chosen the reduced option.

[4] Economic Research Service, *Bonus Food Stamps and Cash Income Supplements* (Washington, D. C.: U.S. Department of Agriculture, October 1974).

[5] U.S. Congress, Subcommittee on Fiscal Policy of the Joint Economic Committee, *Income Security for Americans: Recommendations of the Public Welfare Study*, 93rd Congress, 2d session, December 5, 1974, p. 11.

[6] Edgar K. Browning, *Redistribution and the Welfare Program* (Washington, D. C.: American Enterprise Institute, forthcoming).

[7] David H. Greenberg and Marvin Kosters, "Income Guarantees and the Working Poor: The Effect of Income-Maintenance Programs on the Hours of Work of Male Family Heads," in G. G. Cain and H. W. Watts, eds., *Income Maintenance and Labor Supply* (Chicago: Rand McNally Publishing Co., 1973), p. 69.

NOTES TO INTRODUCTION

[1] Don Paarlberg, *Subsidized Food Consumption* (Washington, D. C.: American Enterprise Institute, 1963).

[2] In addition, sec. 32 of the Potato Control Act of 1935 (P.L. 74-320) allowed the secretary of agriculture to encourage domestic consumption of agricultural commodities by altering normal channels of trade and commerce. See J. M. Whetmore, M. E. Abel, E. W. Learn, and W. W. Cochrane, *Policies for Expanding the Demand for Farm Food Products in the United States: History and Potentials*, Agricultural Experiment Station Technical Bulletin No. 231 (Minneapolis: University of Minnesota, 1959), pt. 1, for a history of this act.

[3] Paarlberg, *Subsidized Food Consumption*, pp. 11–12.

[4] See Chapter I.

[5] See Chapter III.

[6] See Figure 1 in Chapter I.

[7] U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, *Hunger—1973*, 93rd Congress, 1st session, May 1973, pp. 10–12.

[8] P.L. 92-603, sec. 411.

NOTES TO CHAPTER I

[1] See Whetmore et al., *Policies for Expanding Demand for Farm Products in the United States*, Murray R. Benedict, *Farm Policies of the United States, 1790–1950* (New York: Twentieth Century Fund, 1953), and Gilbert Y. Steiner, *The State of Welfare* (Washington, D. C.: The Brookings Institution, 1971).

[2] *Congressional Quarterly Almanac*, vol. 24 (1968), p. 441.

[3] Food Stamp Act of 1964, P.L. 88-525, sec. 1.

[4] U.S. Congress, House of Representatives, *Food Stamp Act of 1964*, H. Rept. 1228, 88th Congress, 2d session, pp. 26–31.

[5] U.S. Department of Agriculture, *Eating the Surplus through the Food Stamp Plan*, pamphlet, March 1941, p. 1.

[6] U.S. Congress, House of Representatives, *Food Stamp Act of 1964*, H. Rept. 1228.

[7] Steiner, *State of Welfare*, p. 199.

[8] U.S. Congress, Senate, *Food Stamp Act of 1964*, S. Rept. 1124, 88th Congress, 2d session, p. 2.

[9] Executive Order 10914, January 24, 1961.

[10] *Congressional Quarterly Almanac*, vol. 17 (1961), p. 863.

[11] The eight pilot areas were Franklin County, Illinois, Floyd County, Kentucky, Detroit, Michigan, the Virginia-Hibbing-Nashwauk area of Minnesota, Silver Box County, Montana, San Miguel County, New Mexico, Fayette County, Pennsylvania, and McDowell County, West Virginia. Before the inauguration of the food stamp program, eligible needy persons in these areas could obtain some foods through the Department of Agriculture's donation of commodities under its direct distribution program.

[12] U.S. Congress, Senate, Committee on Agriculture and Forestry, *Hearings on Food Stamp Act of 1964*, 88th Congress, 2d session, June 18 and 19, 1964, p. 38.

[13] *The Food Stamp Program: An Initial Evaluation of the Pilot Projects*, Food Distribution Division, Agricultural Marketing Service, United States Department of Agriculture, April 1962, p. 13.

[14] *Congressional Quarterly Almanac*, vol. 20 (1964), p. 113.

[15] P.L. 88-525, and *Code of Federal Regulations*, 1969, vol. 7, pts. 1600–1603.

[16] P.L. 88-525, sec. 7 (a).

[17] See, for example, P.L. 88-573 (1964), P.L. 88-635 (1964), P.L. 89-316 (1965), P.L. 89-556 (1966), P.L. 90-91 (1967), P.L. 90-113 (1967), P.L. 90-463 (1968), P.L. 90-552 (1968), P.L. 90-608 (1968), P.L. 91-116 (1969), P.L. 91-127 (1969), and P.L. 91-305 (1970).

[18] See Table 5 in Chapter II.

[19] See *Federal Register*, vol. 40 (January 9, 1975), pp. 1882–1900, and January 10, 1975, p. 2204, for additional food stamp regulations.

NOTES TO CHAPTER II

[1] U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, *Food Program Technical Amendments*, 93rd Congress, 2d session, March 1974.

[2] U.S. Congress, Senate, Committee on Appropriations, *Hearings on Department of Agriculture and Related Agencies Appropriations for Fiscal Year 1973*, 92d Congress, 2d session, pt. 1, p. 1104.

[3] An average participant operating cost is $5.75 for 1970. Consequently calculations from Table 5 yield nonfederal operating costs of 4.5 percent [($5.75) (4.34) ÷ $550.8]. A study of welfare expenditures in California showed 4 percent administrative costs for the food stamp program in 1967–1968; see California Legislature, Senate, Subcommittee on General Research, *A Study of Welfare Expenditures*, vol. 21, no. 15 (1969), pp. 225–30.

[4] S. H. Logan and D. B. DeLoach, *The Food Stamp Program: Del Norte and Humboldt Counties, California*, California Agricultural Experiment Station, Bulletin 860 (Davis, Calif.: University of California, March 1973).

[5] Ibid., pp. 25–32.

[6] U.S. Congress, House of Representatives, Subcommittee on Agriculture-Environmental and Consumer Protection, *Hearings on Appropriations for Fiscal Year 1974 Agricultural Programs*, 93rd Congress, 1st session, pt. 2, p. 642.

[7] If recommendations concerning expanded outreach activities before the June 1974 Senate hearings on nutrition and human needs are adopted, administrative and operating costs would increase substantially; see Sylvia Porter, "Food Stamp Plan Has Flaws," *Chicago Sun-Times*, June 24, 1974.

[8] Each figure was determined by dividing total program costs (or bonus food stamps) by the yearly number of participants.

[9] Trafficking has been defined by the Office of the Inspector General as the unlawful exchange of coupons for profit; see U.S. Congress, Senate, Committee on Appropriations, *Hearings on Department of Agriculture and Related Agencies Appropriations for Fiscal Year 1971*, 91st Congress, 2d session, pt. 1, p. 151.

[10] "Food Stamps Traded for Cash, U.S. Says," *Washington Post*, January 12, 1973.

[11] Ibid., and "Hustlers Haunt Welfare Offices," *Santa Monica Evening Outlook*, March 16, 1971.

[12] U.S. Congress, Senate, Committee on Appropriations, *Hearings on Agriculture Appropriations for Fiscal Year 1971*, pt. 1, p. 151.

[13] U.S. Congress, House of Representatives, Subcommittee on Agriculture-Environmental and Consumer Protection, *Hearings on Appropriations for Fiscal Year 1974*, pt. 3, pp. 637–38.

[14] Ibid.

[15] Ibid., pt. 2, p. 643.

[16] Ibid., pt. 3, pp. 637–638.

[17] Logan and DeLoach, *Food Stamp Program*, pp. 20–21.

[18] John J. Agria, *College Housing: A Critique of the Federal College Housing Loan Program* (Washington, D. C.: American Enterprise Institute, 1972), p. 3.

NOTES TO CHAPTER III

[1] Steiner, *State of Welfare*, p. 202.

[2] To test the hypothesis that the food stamp program contributed to the improvement in agricultural disposable incomes, a linear regression, specifying relative farm income as a function of the food stamp bonus and all other variables (represented by time and a constant term), was formed:

$R = \Theta_1 + \Theta_2 B + \Theta_3 T$ where R = Per capita disposal farm income as a percent of nonfarm income

$H_0 : \Theta_2 > 0, \Theta_3 > 0$, and $\Theta_2 > 0$

$H_1 : \Theta_2 > 0, \Theta_3 \leq 0$, and $\Theta_2 > 0$

B = Total federal bonus

T = Time

Calculated results for 1962 through 1973 indicate that the federal bonus variable is not significantly different from zero. The regression results (with t statistics below the estimated coefficients) are

$$R = \underset{(20.12)}{60.26} + \underset{(0.51)}{.0014B} + \underset{(3.20)}{1.96T}$$

$$R^2 = .84$$

$$F(2,9) = 23.66$$

$$D.W. = 1.40$$

Consequently the federal food stamp bonus does not and other variables do explain the relative improvement in per capita personal disposable farm income.

[3] Calculations for 1970 through 1972 show that 10.5 percent of the dollars spent for home food consumption reach the agricultural sector as net income; see U.S. Department of Agriculture, Economic Research Service, *Farm Income Situation*, FIS-222, July 1973, p. 2, and *Food Consumption, Prices, Expenditures: Supplement for 1972*, Agricultural Economic Report No. 138, 1973, p. 78.

[4] Budgetary studies indicate that individuals in this income class spend approximately one-third of their income on food; see U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, *Hearings on Federal Food Programs—1973*, 93rd Congress, 1st session, August 28, 1973, pt. 3, p. 342.

[5] See John Kraft and Edgar O. Olsen, "The Distribution of Benefits from Public Housing," in *The Distribution of Economic Well-Being*, studies in Income and Wealth, vol. 41 (New York: National Bureau of Economic Research, forthcoming), for an example of this method applied to public housing.

[6] An indirect test of the estimated subjective valu. of the bonus stamps was made by examining participation, bonuses, and recipient benefits for each estimate; see Appendix B.

[7] Malcolm Galatin, "A Comparison of the Benefits of the Food Stamp Program, Free Food Stamps and Equivalent Cash Payment," *Public Policy*, vol. 21 (Spring 1973), pp. 291–302.

[8] No adjustments, however, were made for differences in the costs of living among the states.

[9] This ratio may also reflect steadily increasing participation throughout the year—implying that December was always the peak month. Other evidence suggests that this is not always the case.

[10] Of course, the participant could approximate the variable purchase option by buying the full food stamp allotment in some months and not in others. Purchases every other month would yield the same amount of stamps as the current one-half allotment option. However, since the costs of this option (especially foregone interest) are probably higher for the poor than are the costs of the variable purchase option, this course of action is unlikely.

[11] U.S. Congress, House of Representatives, Subcommittee on Agriculture-Environmental and Consumer Protection, *Hearings on Appropriations for Fiscal Year 1974*, pt. 2, p. 645.

[12] A study of public housing shows that the number of households benefiting from the governmental subsidy is highest in the middle third of eligible households; see Kraft and Olsen, "Benefits from Public Housing."

[13] U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, *Hearings on Nutrition and Human Needs*, 90th Congress, 2d session, January 8, 9, and 10, 1969, pt. 2, p. 414.

[14] See Edgar K. Browning, "The Diagrammatic Analysis of Multiple Consumption Externalities," *American Economic Review*, vol. 64 (September 1974), pp. 707–14.

[15] "Food Stamps Traded for Cash," and "Hustlers Haunt Welfare Offices."

[16] U.S. Congress, House, Committee on Agriculture, *Hearings to Extend the Food Stamp Act of 1964 and Amend the Child Nutrition Act of 1966*, 90th Congress, 1st session, March 15 and 16, 1967, p. 38.

[17] See Edgar O. Olsen, "A Normative Theory of Transfers," *Public Choice*, vol. 6 (Spring 1969), pp. 39–58. These results also assume given individual preferences, endowments, ownership of productive factors, technology, and allocation rules such as pricing.

[18] The amount of the food subsidy will, however, depend on the characteristics of the giver's demand function. If the demand is currently elastic, the subsidy will rise, and if inelastic it will fall, with increases in recipient's income; see Olsen, "A Normative Theory of Transfers."

[19] Browning, "Multiple Consumption Externalities."

[20] A special U.S.D.A. survey covering two of the initial eight pilot projects revealed that a large majority of moderate- and higher-income families favored the food stamp program and felt that it should be continued; see U.S. Congress, Senate, Committee on Agriculture and Forestry, *Hearings on the Food Stamp Act of 1964*, 58th Congress, 2d session, June 18 and 19, 1964, p. 39.

[21] Robert B. Reese and Sadye F. Adelson, *Food Consumption and Dietary Levels under the Pilot Food Stamp Program, Detroit, Michigan and Fayette*

County, Pennsylvania, U.S. Department of Agriculture, Agricultural Economic Report No. 9, June 1962.

[22] Nick Havas and Robert E. Frye, *Pilot Food Stamp Program: Its Effects on Retail Sales in Fayette County, Pa. and McDowell County, W. Va.* (U.S. Department of Agriculture, Agricultural Economic Report No. 29, April 1963).

[23] Paarlberg, *Subsidized Food Consumption*, p. 43.

[24] J. Patrick Madden and Marion P. Yoder, *Program Evaluation: Food Stamps and Commodity Distribution in Rural Areas of Central Pennsylvania* (University Park, Penn.: Pennsylvania State University, June 1972); Dale M. Hoover and James K. Whittaker, *Regression Analyses of the North Carolina Nutrition Survey Data: Some Problems and Tentative Findings* (Raleigh, N.C.: Institute of Statistics, North Carolina State University, December 1972); and J. Gerald Feaster and Garey B. Perkins, *Families in the Expanded Food and Nutrition Education Program: Comparison of Food Stamp and Food Distribution Program Participants and Nonparticipants*, U.S. Department of Agriculture, Agricultural Economic Report No. 246, September 1973.

[25] Logan and DeLoach, *Food Stamp Program*.

[26] Ibid., p. 6.

[27] U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, *Hunger—1973*.

[28] Students were excluded from participation by the 1971 Food Stamp Act amendments. A recent Supreme Court ruling overturned the exclusion, but new U.S. Department of Agriculture regulations explicitly exclude students from eligibility unless their families are also eligible or do not claim tax dependency for federal taxes. See *Federal Register*, vol. 40 (January 10, 1975), p. 2204.

[29] "Many University Students Are Turning U.S. Food Stamps into a Form of Scholarship," *New York Times*, January 2, 1975, p. 12.

[30] U.S. Congress, House of Representatives, Committee on Agriculture, *Hearings on Food Stamp Program: Investigation and Extension*, 93rd Congress, 1st session, March 13; April 10, 11, 12, and 16, 1973, p. 50.

[31] Ibid.

[32] Ibid., p. 80.

[33] Armand J. Thieblot, Jr. and Ronald M. Northrup, *Welfare and Strikes: The Use of Public Funds to Support Strikers* (Philadelphia: University of Pennsylvania Press, 1972), p. 193.

[34] Unsuccessful amendments to prohibit strikers from participation were offered in 1968, 1970 and 1971. In each case the amendment lost by a close margin. Ibid., p. 46.

[35] U.S. Congress, Senate, Committee on Agriculture and Forestry, *Hearings on Food Stamp Act of 1964*, p. 39.

[36] Havas and Frye, *Pilot Food Stamp Program*.

[37] Bureau of Labor Statistics show that prices in the national sample rose 0.3 percent and those in the pilot test areas 1.4 percent from April/May 1961 to April/May 1962. Ibid., p. 10.

[38] Nick Havas, *Pilot Food Stamp Program: Impact on Retail Food Store Sales in Avoyelles Parish, La.*, U.S. Department of Agriculture, Agricultural Economic Report No. 55, May 1964.

[39] Computed from Table 6 and U.S. Department of Agriculture, *Food Consumption, Price Expenditures: Supplement for 1972*, p. 78.

[40] Logan and DeLoach, *Food Stamp Program*, p. 21.

[41] A. Berg, N. S. Scrimshaw and P. L. Call, eds., *Nutrition, National Development and Planning* (Cambridge, Mass.: MIT Press, 1973).

[42] H. A. Kraut and E. A. Muller, "Nutrition and Industrial Performance," *Science*, vol. 104 (1946), pp. 495–97, and Henry Borsook, "Nutritional Status of Aircraft Workers in Southern California," *Milbank Memorial Fund Quarterly*, vol. 23 (1945), p. 111.

[43] U.S. Department of Agriculture, *Dietary Levels of Households in the United States*, March 1957.

NOTES TO CHAPTER IV

[1] In general the simultaneous maximization of two goals is impossible unless there is no manner in which one of the objectives can be increased at the expense of the other.

[2] Council of Economic Advisers, *Economic Report of the President* (Washington, D. C.: Government Printing Office, 1974), p. 344.

[3] U.S. Department of Agriculture, Economic Research Service, *Farm Income Situation*, FIS-222, July 1973, p. 50.

[4] U.S. Department of Agriculture, Economic Research Service, *Farm Income Situation*, FIS-223, February 1974, p. 3.

[5] Victor E. Smith, *Electronic Computation of Human Diets* (East Lansing: Michigan State University Business Studies, 1963), chapter 2.

[6] ibid., p. 10.

[7] The precise level of all essential food elements is not known. Consequently, nutritionists have generally set recommended levels above actual requirements. This tends to raise the cost of the most economical diet.

[8] Quantities were obtained from Smith, *Computation of Human Diets*, p. 19, and prices were obtained from three markets (Big Star, Safeway and Reid Super Save) in Charlottesville, Virginia, during the week of July 14-20, 1974.

[9] Based on quantities for a palatable minimum cost diet in 1955 at East Lansing, Michigan.

[10] See, for example, Patton, *Nutrition of a Group of School Children in Ohio with Improved Diets*, Ohio Agricultural Experiment Station, Bulletin 887 (1961).

[11] The author will welcome more suitable names for this program.

[12] These funds could come from the present food stamp program.

[13] Monies could, for example, be distributed according to the following formula:

Year	*Distribution of Federal Nutrition Funds*
t	$R(t) = [L(t)/(N(t)][B(t)]$
$t+1$	$R(t)+1) = \frac{L(t+1)}{N(t+1)}[.8B(t+1)] + \frac{L(t) - L(t+1)}{N(t) - N(t+1)}[.2B(t+1)]$

where $R(t)$ = Locally received federal nutrition revenues,
$B(t)$ = Total federal LNIP revenues,
$L(t)$ = Local malnutrition total, and
$N(t)$ = National malnutrition total.

[14] Measuring the extent of malnutrition is not an easy task. In most cases, determination of nutritional levels would be based on random samples and from a variety of sources, such as data on illness (from hospitals), composition of food sales (from retail or wholesale operations), and so on. These, of course, will not provide precise levels of malnutrition, but the costs from incorrect measurement should be compared with the costs of other nutrition programs before the LNIP alternative is completely rejected.

NOTES TO APPENDIX D

[1] Paarlberg, *Subsidized Food Consumption*, pp. 55-65.

[2] Corinne Le Bovit and Faith Clark, "Are We Well Fed?" *Food: Yearbook of Agriculture* (Washington, D. C.: U.S. Government Printing Office, 1959), p. 624.

[3] U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, *Poverty, Malnutrition, and Federal Food Assistance Programs: A Statistical Summary*, 91st Congress, 1st session, p. 5.

[4] U.S. Department of Agriculture, *Dietary Levels of Households in the United States, Spring 1965: A Preliminary Report*, Agricultural Research Service, No. 62-17, January 1968, p. 9.

[5] U.S. Department of Health, Education, and Welfare, *Ten-State Nutrition Survey*, pp. V-11 and V-92.

[6] Charles E. Butterworth, "The Skeleton in the Hospital Closet," *Nutrition Today*, March/April 1974, pp. 4–8; and George L. Blackburn and Bruce Bistrian, "A Report from Boston," *Nutrition Today*, May/June 1974, p. 30.

[7] Logan and DeLoach, *Food Stamp Program*.

[8] Ibid., pp. 9–10.

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Clarkson argues that food stamps are basically an inefficient income supplement—which the recipient is required to use to purchase food products. According to his analysis, the government spends in excess of $1.09 to provide $1.00 in bonus food stamps that have an average value to recipients of only 82 cents. Thus the average recipient would trade $1.00 in food stamps for 83 cents in cash or other goods and think he was better off.

Kenneth W. Clarkson, assistant professor of economics at the University of Virginia, was formerly associated with the Office of Management and Budget and with the Commission on Government Procurement. A specialist in price theory, he is the author of a number of essays on governmental efficiency, law of the seas, and hospital management.

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